



2025 Board of Trustees Retreat

March 18-19, 2025

Boar's Head
Charlottesville, Virginia

Board of Trustees Retreat

Boar's Head | The Ballroom

Tuesday, March 18, 2025

3:00 p.m. Welcome & Opening Remarks

A. Scott Andrews - Virginia Retirement System

Chairman, Board of Trustees

Patricia Bishop - Virginia Retirement System

Director

Andrew Junkin - Virginia Retirement System

Chief Investment Officer

4:55 p.m. Day 1 Closing Remarks

Andrew Junkin - Virginia Retirement System

Chief Investment Officer

3:10 p.m. Private Credit

Jim Zelter - Apollo Global Management

President

6:00 p.m. Buffet Dinner - The Hearth Room

Welcome & Remarks

A. Scott Andrews - Virginia Retirement System

Chairman, Board of Trustees

4:00 p.m. Fiduciary Education

Robert D. Klausner

Klausner Kaufman Jensen & Levinson

Principal

Dinner Speaker: Decision Making

Michael Mauboussin - Morgan Stanley

Head, Consilient Research

Counterpoint Global

Welcome

A. Scott Andrews
Chairman,
VRS Board of Trustees



Welcome

Patricia Bishop
Director



Guest Speaker: Private Credit

Jim Zelter
President

Apollo Global
Management



Guest Speaker: Private Credit

Jim Zelter | Apollo Global Management



Jim Zelter is President of Apollo Global Management, overseeing operations and key strategic initiatives across its asset management and retirement services businesses. Jim serves on Apollo's Leadership Team and on the Firm's Board of Directors.

Since joining Apollo in 2006, Jim has led the broad expansion of Apollo's credit platform, and most recently served as Co-President of Apollo Asset Management, where he co-led day to day operations, including all the Firm's revenue-generating businesses and enterprise solutions across its integrated alternative investment platform. Jim also Co-Founded Apollo Women Empower (AWE), the Firm's women's network. Prior to Apollo, Jim was with Citigroup Inc. and its predecessor companies in a variety of roles including Chief Investment Officer of Citigroup Alternative Investments. Before joining Citigroup, he was a high-yield trader at Goldman Sachs.

Jim earned his degree in Economics from Duke University. He sits on the board of directors of DUMAC, the investment management company that oversees the Duke University Endowment in addition to the Duke University Board of Trustees, the university's governing body that oversees its educational mission and fiscal policies. He also serves on the board of directors of Partnership for New York City, a non-profit organization that helps solve public challenges, create jobs and strengthen neighborhoods throughout the five boroughs and Board of Fellows of Weill Cornell Medicine, one of the leading academic medical centers in the United States. Additionally, he sits on the board of directors of the Bridge Golf Foundation, which is committed to using the game of golf to improve life outcomes for young men of color in Harlem, New York.

APOLLO

Private Credit in 2025
Prepared for Virginia Retirement Systems

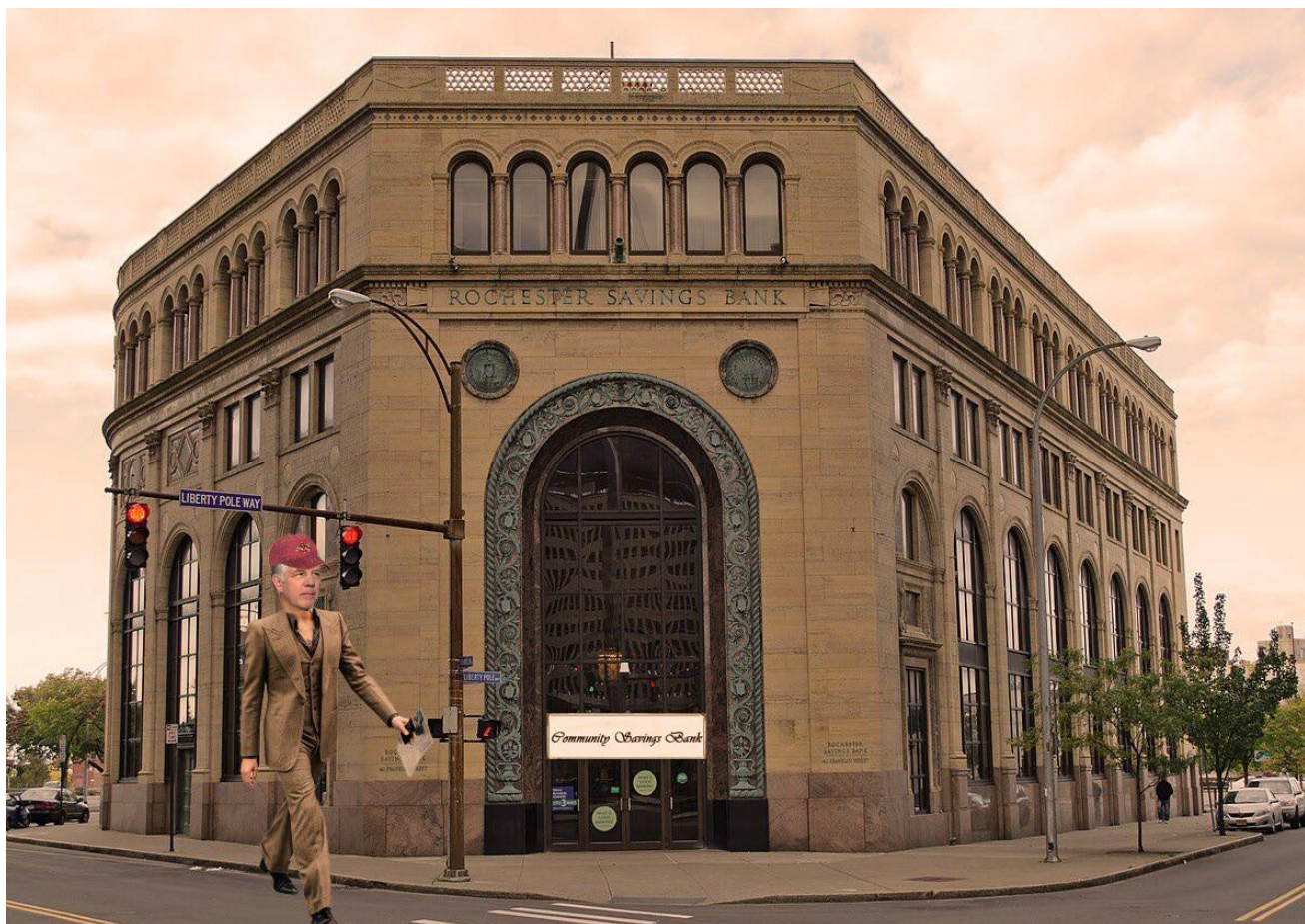
March 2025

Unless otherwise noted, information as of March 2025.

Confidential and Proprietary - Not for distribution, in whole or in part, without the express written consent of Apollo Global Management, Inc.

It should not be assumed that investments made in the future will be profitable or will equal the performance of the investments shown in this document.

1970s...



1980s...


Michael Milken fueled
high-yield debt markets



Private Equity firms drove
takeovers using debt



1990s and Beyond...



Globalization



**Lower
Interest
Rate
Environment**



**Changing
Regulatory
Environment**



Technology

Reminder...Credit Can Only Be Sourced
from Two Places

Sources of Credit

Banks



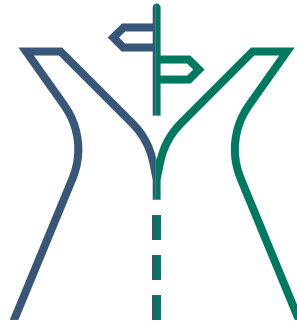
Daily Liquidity



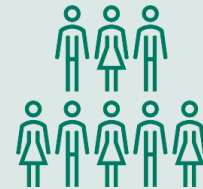
Leveraged



Shrinking Balance
Sheets



Investors



Long-Dated



Unlevered



Growing Balance
Sheets

1990 – 2000: Banks / Capital Markets



Globalization
of Industry



Expanding Global
Capital Markets

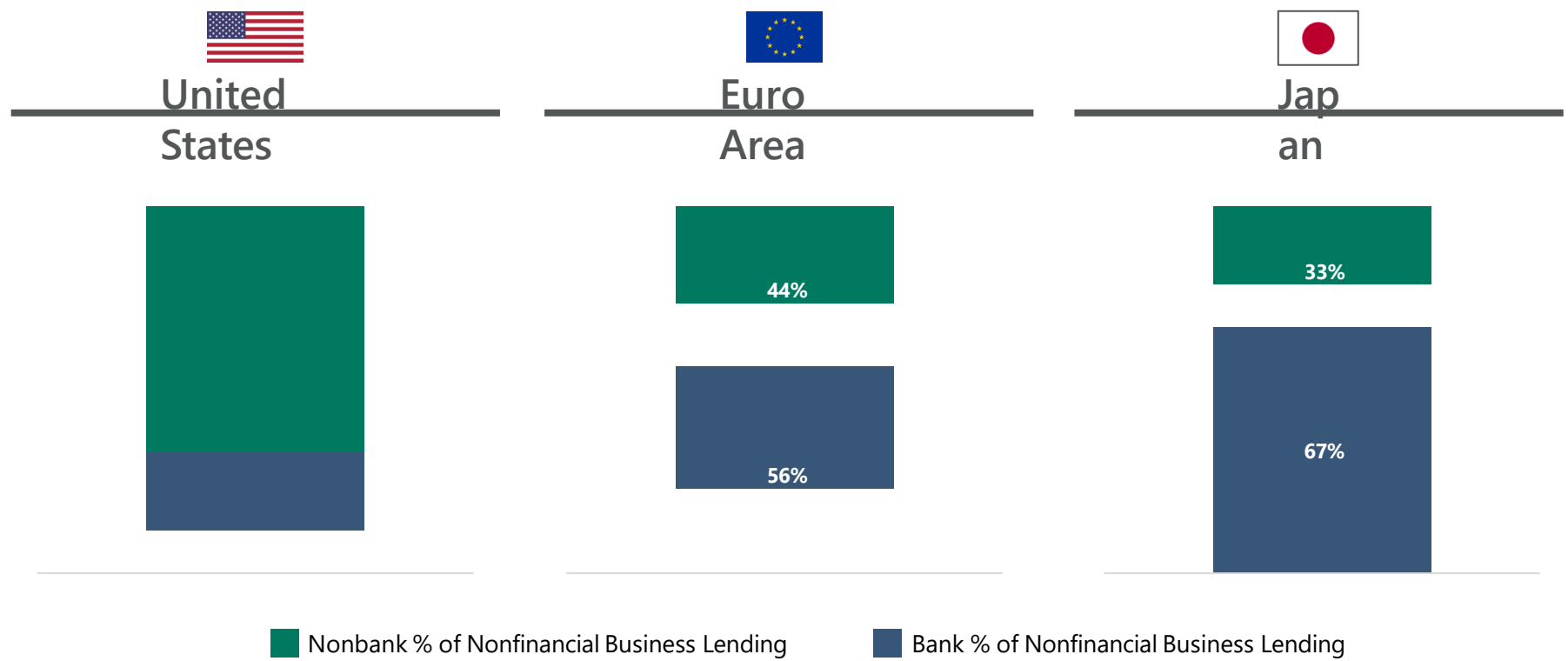


Money Printing



Growing Valuations

Sources of Credit

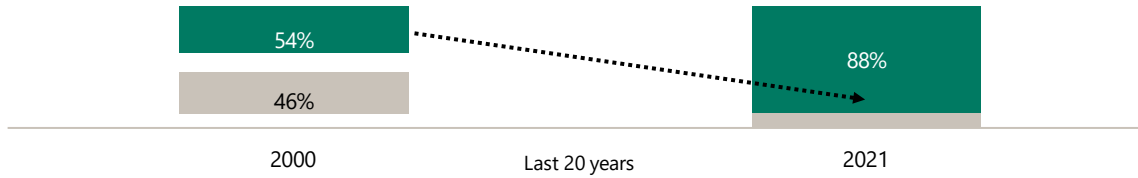


Source: Bank for International Settlements. Data as of February 2024.

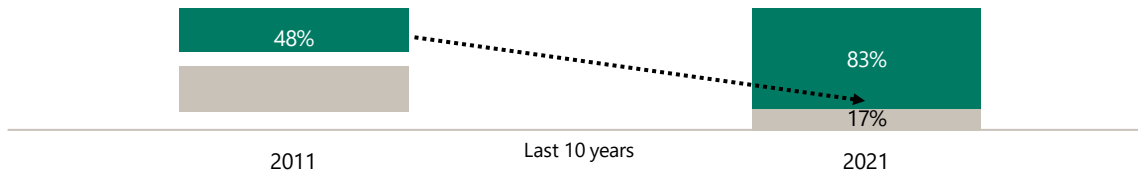
Supply of Credit from Banks

US Bank Share Reduced In the Last 20 years

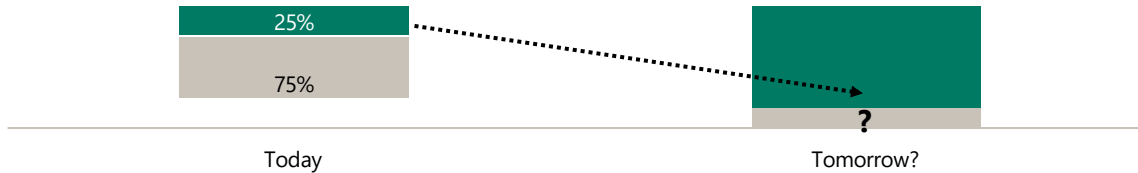
Non-Bank Share of LL Market
Bank Share of LL Market



Europe Followed A Similar Pattern



Is Asia Next?



Bank Share Catalysts



Basel 3



Talent Drain



Costs



IFRS 9

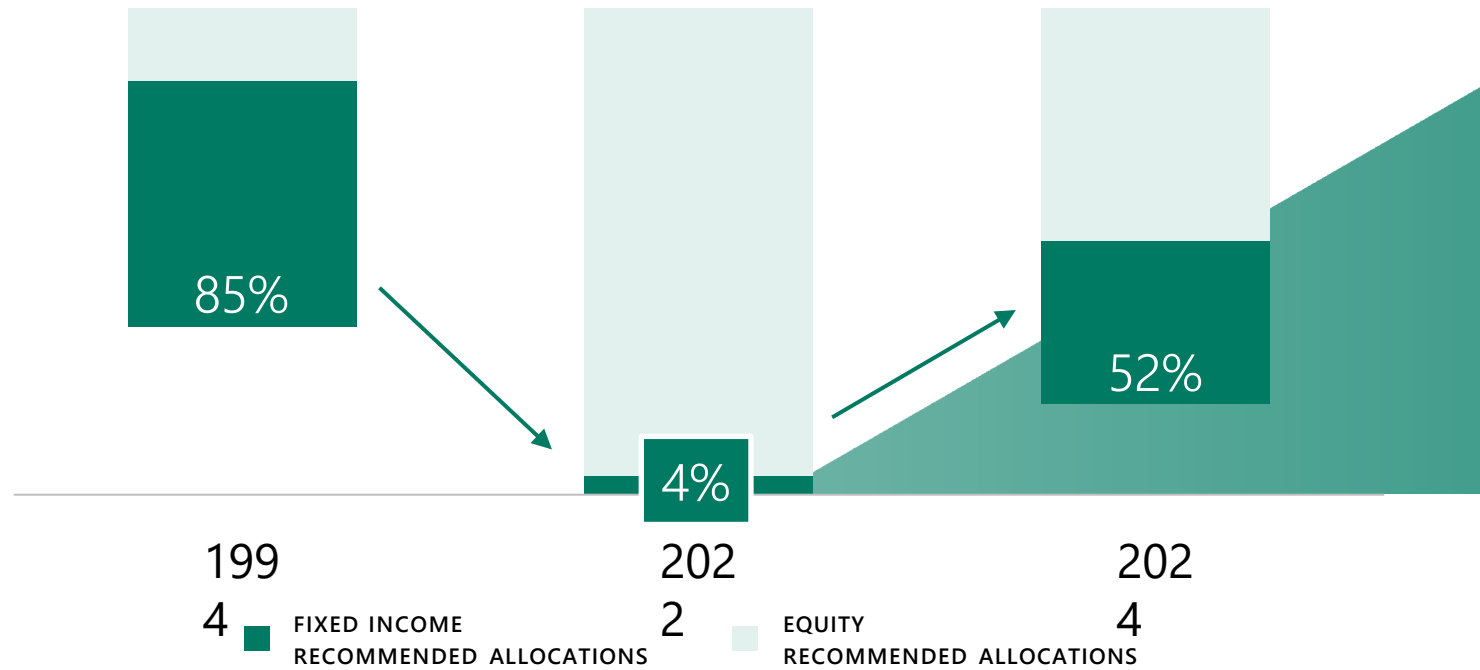


Recession



Geo-politics

Allocations Are Shifting Back Toward Fixed Income



Source: 2024 Asset Allocation Review published by The Callan Institute, dated January 2, 2024 "Risky Business Update: Our 2024 CMAs Change the Equation". Fixed Income Allocation: U.S. Fixed Income. Equity Allocation: Small-to-Mid Cap Equity, Large Cap Equity, Private Equity, Real Estate. 2024 allocations dated as of January 2024.

Private and Confidential

What's Driven Demand Since 2020?

1

**Investors
Search For
Yield**

2

**Private Credit
Gaining Scale /
Investor Results**

3

**Insurance evolution
of investing
across credit**

2

**Continued
refinement of
banking model**

The Perception of Private Credit: Not in Line with Reality

Myths		Reality
Systemic Risk	➔	De-Leveraging / De-Risking
Opaque	➔	Transparent
Riskier Credits	➔	IG and Lower Losses
Not Regulated	➔	Appropriately Regulated
Competes with Banking System	➔	Partners to Banks

Myth #1: Private Credit = Levered Lending

Trade Finance	Royalties	ABS	Revolvers	Aircraft Leasing
CRE Debt	Direct IG	Equipment Leasing	Fund Finance	Railcar Leasing
Solar Finance	Hybrid Finance	Infra Solutions	Consumer	Residential Mortgage

Senior-Secured Lower-Risk Assets:

Comparable Investment Grade +150-300bps

REALITY: *Private credit today is predominantly senior secured lower risk investment grade comparable assets*

Myth #2: Private Credit Managers Employ a Lower Standard of Credit Underwriting

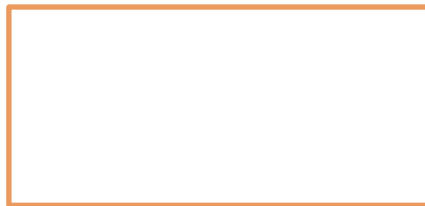
	Broadly Syndicated Loans	Direct Origination
Credit Documentation Control	✗	✓
Due Diligence Access	Partial	Full
Relationship with Borrower	Limited	Comprehensive
Origination and Spread Economics	✗	✓
Syndication Control	✗	✓
Recurring Flow and Allocation Control	✗	✓
Granularity	Concentrated	Granular

Represents the views and opinions of Apollo Analysts. Subject to change at any time without notice. For discussion purposes only.

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REALITY: *Direct origination makes it possible to control the structure, the process and documents*



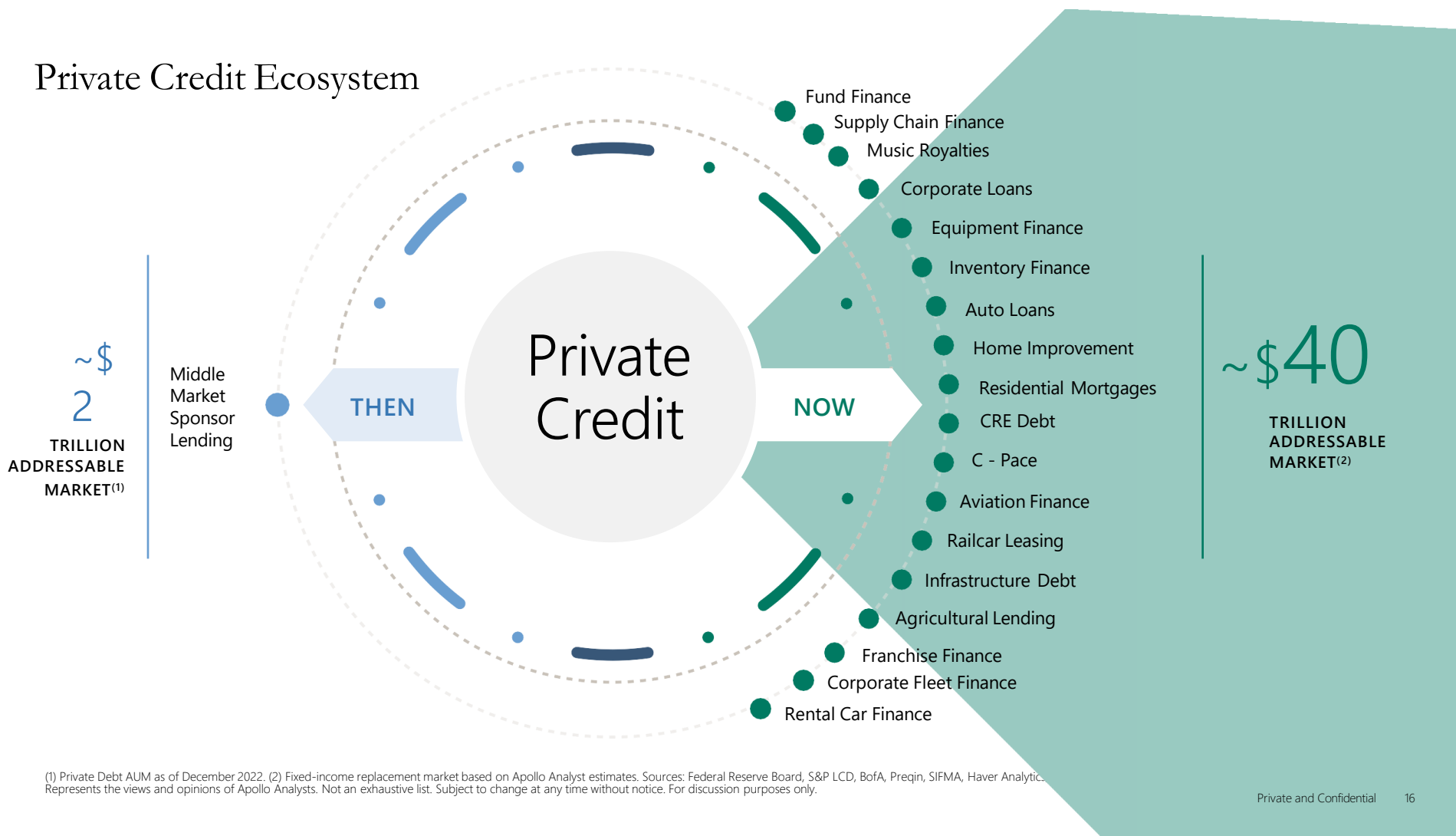
REALITY: *Private credit can be structured to align with the risk return threshold of underlying investors*

Our View of the Addressable
Private Credit Market is Broader...

\$2T

+\$40T

Private Credit Ecosystem



(1) Private Debt AUM as of December 2022. (2) Fixed-income replacement market based on Apollo Analyst estimates. Sources: Federal Reserve Board, S&P LCD, BofA, Preqin, SIFMA, Haver Analytics. Represents the views and opinions of Apollo Analysts. Not an exhaustive list. Subject to change at any time without notice. For discussion purposes only.

What is the Winning Formula?

✓ Flexibility

+

Duration

✓

+

Diversification

✓

+

Creativity

✓

=



intel.

\$11bn

Equity in a JV to
fund CapEx Projects



MUBADALA

\$2bn

Low-Teens, Shorter Duration
Preferred for an IG Company



**Hewlett Packard
Enterprise**

\$1bn

Inventory Financing

SONY

\$1bn

Acquisition Financing

ABInBev

\$3bn

Equity in a JV
for **Deleveraging**

Lenovo

\$300mm

Inventory Financing

xHg

TBC

Financing for Employee
Fund Commitments +
Software Securitization

x3

VONOVIA

€3bn

Minority Equity for
Balance Sheet Efficiency

x3

AIRFRANCE

€2.5bn

Equity-Backed Investment
for **Refinancing**

x2



AT&T

\$10bn

**Pension Risk Transfer +
Preferred Equity Solution**

x2



\$1bn

Private Surplus Notes for
a **Monetization Solution**

2025

Is Private Credit Lost at Sea?



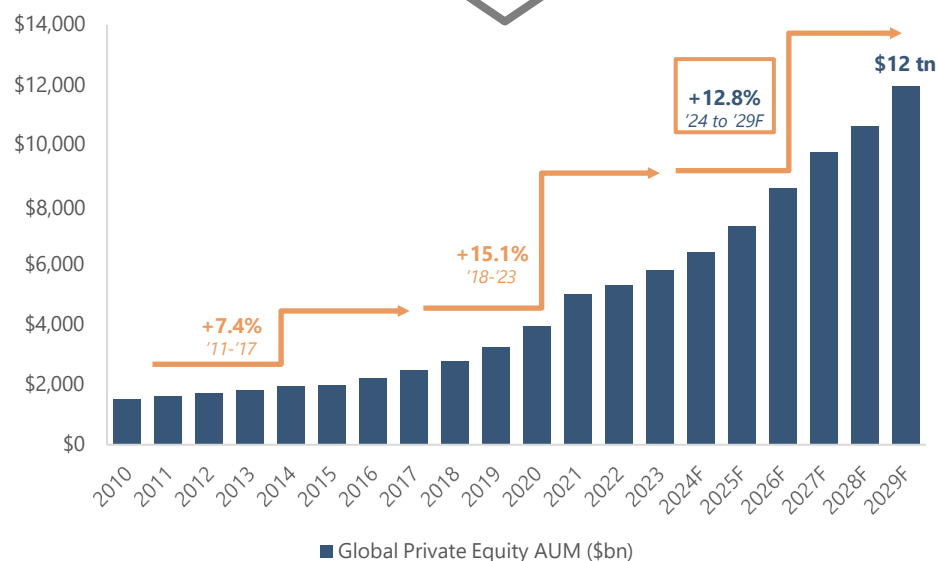
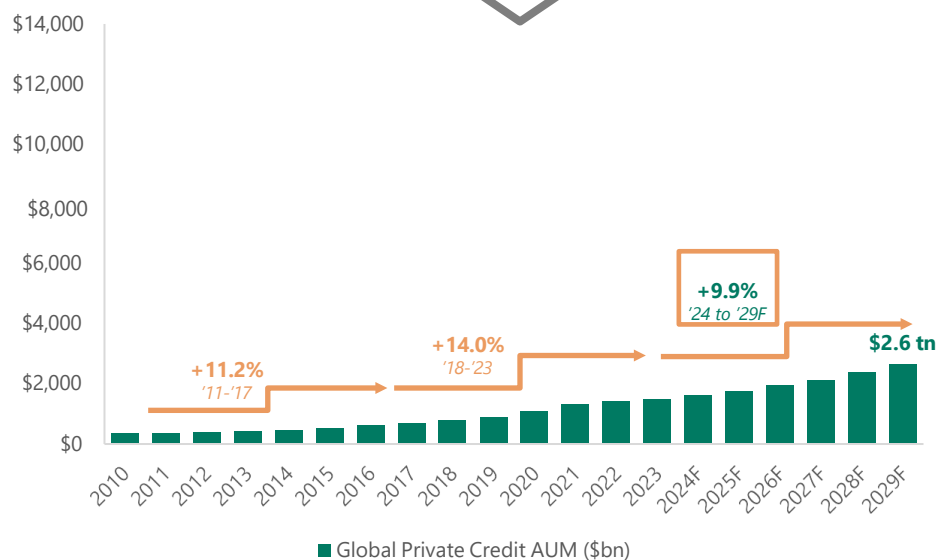
No Real Bubble Here...

APOLLO

Private Credit

-or-

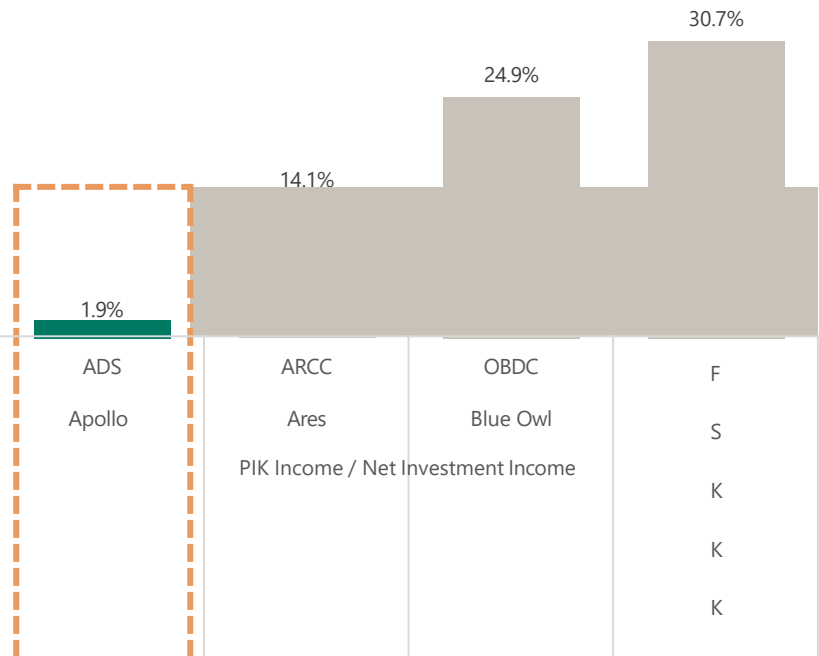
Private Equity



Source: Preqin as of 3Q 2024. There can be no assurances that any of the trends described herein will continue or will not reverse. Past events and trends do not imply, predict or guarantee, and are not necessarily indicative of future events or results.

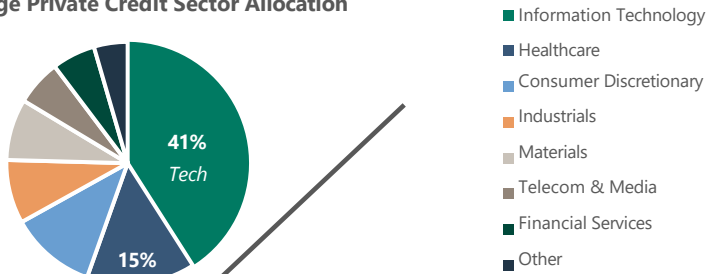
Healthcare Technology vs. AI

Rise of Payment-in-Kind ("PIK") Income

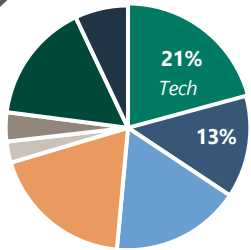


Technology and Healthcare Sector Heavy

Average Private Credit Sector Allocation



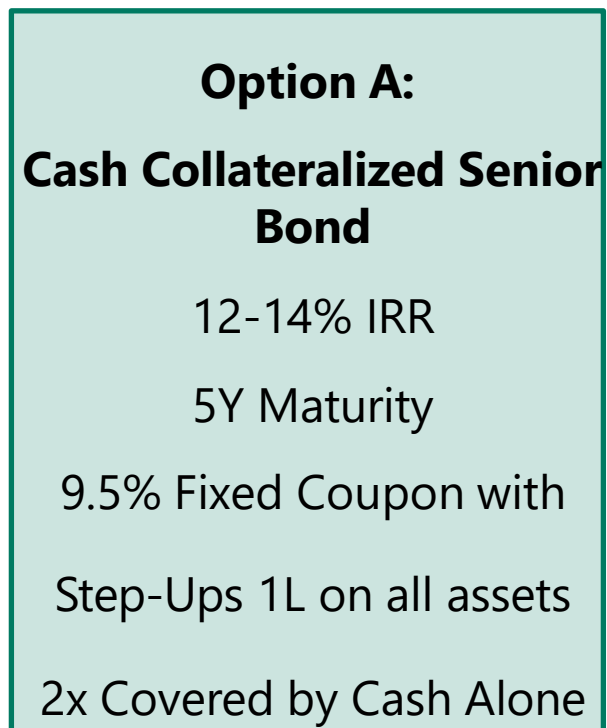
Apollo ADS BDC Sector Allocation⁽¹⁾



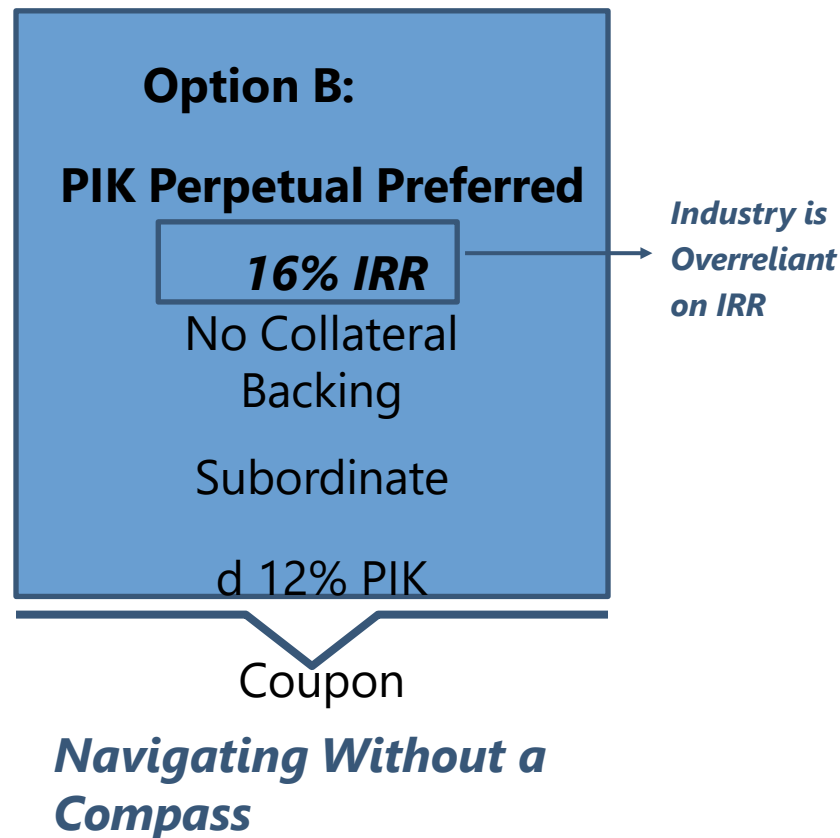
Source: (Left) J.P. Morgan, BDC Filings as of 3Q 2024. (Right) Bloomberg, Prequin, S&P Capital IQ, and IMF staff calculations. Average private credit sector allocations reflects the breakdown of private credit borrowers by sector based on last three-year deal volume (percent share by global deal volume). (1) ADS BDC sector allocations as of September 30, 2024. There is no guarantee that similar allocations or investments will be available in the future. Please refer to ADS's prospectus for additional information on ADS's terms, provisions, and risk factors.

Who is Really Lost at Sea?

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-or-



Funding Structure

APOLLO



~\$11 billion

~8%

30 Year Capital

-VS-

Rest of the Industry:

~10%

10 Year

Capital Infra + RE

Equity Funds

*Capital partners are not truly
long-term if fund structures
demand people to sell*

TO EVERYONE WHO ALLOCATED...
HERE IS YOUR BOUNTY!



Outlook for 2025 and Beyond...

- ✓ Secured permanent role as part of broad asset allocation
- ✓ Well-positioned to expand beyond traditional sponsor lending → small pond to big ocean
- ✓ Global expansion continues to gain traction and grow (from investors to issuers)
- ✓ Will be subject to broad credit cycle dynamics

POSITIVE OUTLOOK IN THIS MARKET

A low-angle photograph of a sailboat's white sails against a clear blue sky. A faint rainbow is visible in the background. The sails are white and curved, with some rigging visible on the left. The text "THANK YOU" is centered in a dark blue, sans-serif font.

THANK YOU

Guest Speaker: Fiduciary Education

Robert D. Klausner
Principal

Klausner Kaufman
Jensen & Levinson



Guest Speaker: Fiduciary Education

Robert D. Klausner | Klausner Kaufman Jensen & Levinson



Mr. Klausner is the principal in the law firm of Klausner Kaufman Jensen & Levinson. For more than 46 years, he has been engaged in the practice of law, specializing in the representation of public employee pension funds. The firm represents state and local retirement systems in more than 25 states and territories. He is admitted to practice in Florida, Texas and Wisconsin. Mr. Klausner has assisted in the drafting of many state and local laws on public employee retirement throughout the United States.

Mr. Klausner is a frequent speaker on pension education programs and has also published numerous articles on fiduciary obligations of public employee pension trustees. He is co-author of the book *State and Local Government Employment Liability*, published annually by Thomson-West Publishers and is the author of the first comprehensive book on the law of public employee retirement systems, *State and Local Government Retirement Law: A Guide for Lawyers, Trustees, and Plan Administrators*, published annually by Thomson-West Publishers.

Mr. Klausner graduated *Phi Beta Kappa* from the University of Florida with a Bachelor of Arts and from the University Florida College of Law with the degree of Juris Doctor. For more than 25 years, Mr. Klausner has been listed in the publication *The Best Lawyers in America* and holds an AAV Pre-eminent@ rating, the highest rating for competence and ethics, from Martindale Hubbell national lawyer rating service.

In 2008, Mr. Klausner successfully represented the Commonwealth of Kentucky and the Kentucky Retirement Systems in the United States Supreme Court in *Kentucky Retirement Systems v. Equal Employment Opportunity Commission*, 128 S. Ct. 2361 (2008).

Mr. Klausner lives in Cooper City, Florida with his wife of 47 years, Kathy. They have four daughters, four sons-in law and seven grandchildren.



I. FIDUCIARY DUTY- THE BASICS

1. A person is a fiduciary with respect to an employee benefit plan to the extent he/she exercises discretionary authority with respect to plan and assets.
2. Exercise of discretion is the key.
3. Can include more than just the trustees.
4. Extends to investment management and benefit administration.
5. One of the two primary duties of a fiduciary is the duty of loyalty. Loyalty means that the trustee is focused on acting exclusively in the best interests of the participants. To that end, trustees cannot claim to also serve the interests of participating employers or serving the interests of the taxpayers. While efficient and

prudent management of the System will benefit the plan sponsors and ultimately the taxpayers, those can only be by-products of acting in the best interests of the System as a whole. This means that the duty is not a distinct group of participants but to the participants as a whole.

6. The second primary duty of a fiduciary is the duty of prudence. Prudence is generally defined as the course of conduct that an individual in a comparable enterprise would undertake. In the pension context, this means that investments will be made with due regard to risk and reward and consideration of the future financial needs of the plan. All investments involve risk. Prudence involves reasonable risk. Prudence also requires diversification of the investment portfolio to mitigate the risk of overconcentration in a single strategy. Decision making cannot be made with any consideration other than investing the assets for the highest and best return with a reasonable degree of risk. What is reasonable risk for one pension fund may not be reasonable for another. A prudent trustee seeks advice on the risk tolerance of the System, taking into account its future funding needs and the general market conditions.
 7. Trust assets may only be used to pay benefits as earned and to defray the reasonable expenses of the System. Plan assets include proxies on equities. They must be voted consistent with the best financial interests of the System as a whole and without regard to political concerns. Assets must be invested for the best expected financial result and not chosen or rejected for political concerns, for protection of specific industries, or for the achievement of a social goal unrelated to the successful performance of the investment.
- B. Modern Portfolio Theory -The Difference Between a Prudent Person, A Prudent Investor and the Prudent Expert
1. In the literature discussing the duties of pension trustees in the area of investment responsibility, terms like “prudent person,” prudent investor,” and “prudent

expert” are used. While the terms are sometimes used interchangeably, their histories and meanings are distinct.

2. In *The New Prudent Investor Rule and Modern Portfolio Theory: A New Direction for Fiduciaries*, Alberts and Poon, 34 AMBJ 39 (1996), the history of fiduciary duty is explored at length from its biblical origins in Luke 16:1-8, 10 (the parable of the stewards) and St. Thomas Aquinas’ *Treatise on Prudence and Justice* through the creation of the prudent expert rule under ERISA. American jurisprudence is said to begin with the decision in *Harvard College v. Amory*, 26 Mass. (9 Pick) 446 (1830), in which the Court held:

All that can be required of a trustee to invest, is, that he shall conduct himself faithfully and exercise a sound discretion. He is to observe how men of prudence, discretion, and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, as well as the probable safety of the capital to be invested.

3. The adoption of the Employee Retirement Income Security Act of 1974 further extended this rule to a new, higher standard. The operative provisions of Section 404(a), codified as 29 U.S.C. 1104 (a)(1)(B), require a fiduciary to discharge his or her duties:

“with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.”

4. While ERISA Section 404 (a) has its foundations in the prudent person and prudent investor rules, legal scholars have concluded that the statute created a new “prudent expert rule.”
5. While the ERISA standard is obviously based on the common law prudent investor rule, in many respects ERISA goes well beyond traditional requirements. For example, ERISA requires the care that a “person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.” This has been termed the “prudent expert” rule (as opposed to the prudent person rule’s “managing his own property” standard) and is perceived as imposing a higher standard. The legislative history indicates that the “enterprise of like character” language was intended to form a standard that would consider the attributes and diversity of employee benefit plans in federalizing the common law of trusts. Another major change wrought by ERISA is that it permits a fiduciary to emphasize the performance of the overall portfolio as compared with the performance of each individual investment. At common law, the fiduciary was required to defend the performance of each individual investment in the portfolio. Virginia’s trust code prudent person rule also looks at each investment separately. See *Carlson v. Wells*, 281 Va. 173 (2011). Bobo, *Nontraditional Investments of Fiduciaries: Re-Examining the Prudent Investor Rule*, 33 Emory L J 1067, 1078 (1984). See also, Hughes, *Hot Topics and Important Considerations for Retirement Plan Fiduciaries*, 57 - Jul Advoc. 38 (June/July 2014), Note 7.
6. According to the prudent expert standard, the test is whether the trustees, at the time they engaged in an investment, employed appropriate methods to investigate the merits of the investment and its

structure. *Laborers National Pension Fund v. Northern Trust Quantitative Advisors, Inc.*, 173 F.3d 313 (5th Cir. 1999); *Donovan v. Mazzola*, 716 F.2d 1226 (9th Cir. 1983). Perhaps more importantly, the prudent expert standard (found in the Restatement (Third) of Trusts) greatly expands a trustee's ability to delegate to investment professionals. See, Langbein, *Reversing the Non-Delegation Rule of Trust - Investment Law*, 59 MOLR 105 (1994).

C. Judicial Standards.

1. **Meinhard v. Salmon**, 164 NE 545 (N.Y. Ct.App. 1928).

Court determines that common standard of the marketplace is unacceptable to fiduciaries. General trust standard was expanded for pension trustees to include a definition of "undivided loyalty" to be applied with "uncompromising rigidity."

2. **NLRB v. Amax Coal Co.**, 453 U.S. 322 (1981).

U.S. Supreme Court holds that plan trustees have an "unwavering duty of complete loyalty" to members and beneficiaries. Trustees cannot serve any master/mistress other than the fund. The pressures of undivided loyalty are inconsistent with the give and take of collective bargaining.

D. General Principles Applicable to Statutory Officers.

1. The powers of a legislatively created board are found in its enabling legislation and in the inherent power to reasonably exercise that legislative grant of authority to accomplish its assigned mission. *Carpenter v. Virginia Real Estate Board*, 20 Va. App 100 (1995)
2. As statutory officers, the Board draws its authority from the specific provisions of Va. Code § 51.1 -124.1 et seq. as well as the discretion reasonably inherent in those specific powers. The Board cannot alter the legislation

governing the System, nor may it expand its authority into areas which the General Assembly has not delegated to it.

II. WHAT DOES VIRGINIA LAW SAY ABOUT TRUSTEE DUTIES?

- A. Article X, Section 11 Virginia Constitution
 - 1. Retirement funds are a separate trust.
 - 2. Invested and funds used solely for the exclusive benefit of participants and to defray the cost of the system.
 - 3. System is funded on an actuarially sound basis in accordance with generally accepted actuarial principles.
- B. Va. Code § 51.1 -124.1 et seq.
 - 1. The Board is a statutory creation to effectuate provisions of the Constitution.
 - 2. 51.1-124.1 requires System to be managed in the best interest of the participants by requiring adequate contributions and overall soundness.
 - 3. System is an independent agency exclusive of legislative, executive, and judicial branches of government.
- C. Va. Code § 51.1-124.22
 - 1. Sets forth general responsibilities of Board.
 - 2. Reserves to the Board the authority to changes actuarial assumptions as needed. In some states there have been claims about whether the change in actuarial assumptions results in a diminution of benefits or an improper increase in employer liability. *Baumgardner v. PERB of Montana*, 119 P.3d 77 (Mont. 2005) (no

constitutional right to a specific actuarial assumption); *Louisiana Municipal Association v. State and Firefighters Retirement System*, 893 So.2d 809 (La. 2005) (change in employer contribution due to changed actuarial assumptions is valid).

3. Provides immunity from investment losses suffered in non-defined benefit programs. This differs from the rules under ERISA. In *Hughes v. Northwestern University*, 142 S.Ct. 737 (2022), U.S. Supreme Court found a suit for breach of ERISA fiduciary duty could proceed based on failure to monitor performance and fees of defined contributions offerings.
4. Trustees are subject to State and Local Government Conflicts of Interest Act (§ 2.2-3100 et seq.) pursuant to § 51.1-124.21.

D. Va. Code § 51.1-124.24

1. Chief Investment Officer reports directly to the Board of Trustees.
2. Delegates management of the investment division but it does not delegate the Board's ultimate fiduciary responsibility.
3. The CIO is a prudent expert who is held to the highest standard of loyalty and competence.
4. The Board is governed by the prudent investor standard – what would a prudent person engaged in a similar enterprise with similar aims do in the management of the portfolio. See Va. Code § 51.1-124.30, discussed below.
5. The Board, through the investment policy statement, sets the standards for the CIO to “direct, manage, and administer” the investment program.

6. The Board's job is to evaluate the success of the program and to demand accountability from the CIO and the managers.

7. It is absolutely NOT the job of the Board to micro-manage investment decision making.

E. Va. Code § 51.1-124.30

1. This statute sets forth standard of care applicable to the Board:

The Board shall discharge its duties with respect to the Retirement System solely in the interest of the beneficiaries thereof and shall invest the assets of the Retirement System with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. The Board shall also diversify such investments so as to minimize the risk of large losses unless under the circumstances it is clearly prudent not to do so.

2. The standard here is consistent with the Uniform Prudent Investor Act which is primarily directed to private trusts. Va. Code §§ 64.2-781 and 64.2-782.
3. The law encourages delegation but holds the recipient of the delegation to the same standard as the trustee.
4. There is no personal liability for decisions made consistent with the prudent investor standard of care.
5. Specifically addresses the absence of liability for defined contribution type investments made by participants.

III. WHAT DO VIRGINIA COURTS SAY ABOUT FIDUCIARY DUTY?

A. *Crosby v. ALG Trustee, LLC*, 296 Va. 561 (2018)

Fiduciary duty can “sound” (be based upon) tort or contract. If contractual, the question is whether the act of omission or nonfeasance arose from the express language of the contract. As a statutory body, the powers and duties of the board are founded upon the express language of the Virginia Code.

B. *Ononuju v. Virginia Housing Authority*, 101 Va. Cir. 228 (2019)

To prevail on a breach of fiduciary claim in Virginia, plaintiff must prove the defendant (1) owed a duty, (2) the duty owed was breached, and (3) the breach caused damages. The Virginia Supreme Court has said no cause of action lies for breach of fiduciary duty where the alleged fiduciary duty existed solely from a contractual relationship. Virginia courts have chosen not to incorporate all common law duties of a fiduciary recognizing only a trustee’s duty to act with impartiality.

IV. WHAT HAVE COURTS SAID GENERALLY ABOUT FIDUCIARY DUTY OF PENSION TRUSTEES?

Virginia courts have not addressed the fiduciary duty of retirement trustees. It is instructive to see how federal courts and courts of other states have addressed the issues.

A. Am I my Brother’s or Sister’s Keeper?

1. The question here is about co-fiduciary liability. If a trustee is aware of misconduct on the part of another trustee, what is the duty to act? The scope of the duty is undefined as it relates to the System. The Trust Code expressly creates co-fiduciary liability, but the Trust Code does not apply employee benefit trusts. Va. Code § 64.2-700(A)(4).

2. Even though Title 51.1 is silent, has this concept been applied in the public sector? Yes, *In New Orleans Firefighters Pension and Relief Fund v. City of New Orleans*, 157 So.3d 581 (La. 2015) the board of trustees of the Fund filed suit against the City for delinquent contributions. The City filed a counterclaim against the trustees for mismanagement of investments. A trial court dismissed the City claim against the Board but did allow a separate claim by the City Finance Director, who served as a statutory trustee. The Finance Director was permitted to sue his fellow trustees under a statutory duty of accountability. The Louisiana Supreme Court allowed the Finance Director's suit to proceed. Both the contribution claim, and the co-fiduciary liability claim were settled on the eve of trial.

B. Evolving Due Diligence Litigation Concerning ESG

1. While ESG remains a significant and evolving legislative battleground, the fight has now moved to both state and federal courthouses.
2. *Spence v. American Airlines*, 2025 WL 225127 (N.D. Tex. 2025) – In 2023, a group of American Airline pilots sued the company for including ESG focused products in their 401(k) plan investment options. A federal court in Texas denied a motion to dismiss on February 22, 2024, finding enough facts were alleged to constitute a cause of action but declining to rule on the substantive merits at this stage of the case. On January 10, 2025, the Court did rule in favor of the Plaintiffs. The Court found that the use of BlackRock products which employed ESG in certain decisions violated the duty of loyalty on the basis that decisions were not based solely on the financial best interest of the plan participants. The complaints related to proxy voting and shareholder initiatives and, not investment performance. Given the widespread use of these products in the institutional investment market, the Court did find use of the BlackRock products prudent.

3. *Utah v. Micone*, 2025 WL 510331(N.D. Tex. 2025) – Only one month after the *Spence* decision, a different federal judge in the same district issued an opinion upholding the Biden-era ESG rule issued by the Department of Labor. Fourteen state attorneys general and some energy trade associations sued to set aside the rule which permitted consideration of ESG when financial considerations were otherwise equal on the grounds that it violated the duties of prudence and loyalty. The court originally upheld the rule in 2023 on the basis that long-standing U.S. Supreme Court precedent required deference to an agency’s expertise. The deferral rule, however, was abandoned by the Supreme Court in 2024. A federal appeals court remanded the case back to the trial judge for consideration without regard to agency deference. The court, on review, again upheld the rule because it did not permit a fiduciary to deviate from acting in the exclusive interest of the plan participants. He found that once alternatives were found to be equal in expected performance and risk, it was within the fiduciary’s discretion to decide which investment to employ even if ESG factors were present. A further appeal is expected. While this decision and *Spence* are ERISA decisions not directly applicable to VRS (or any other public plan), they do illustrate the confusion in judicial circles about what constitutes the fiduciary duty of loyalty.
4. *Wong v. NYCERS*, Index No. 652297/2023 - New York City’s public pension plans adopted a fossil fuel divestment plan and were sued by a group of participants claiming it damages the plan. The boards of trustees moved to dismiss on the basis that the defined benefits paid by the plan are not dependent on asset performance, citing to a 2020 U.S. Supreme Court case holding the same for an ERISA plan. The motion to dismiss was granted on the basis that members of a defined benefit plan have no direct ownership of assets nor is the asset base determinative of the defined benefit.

5. *Kennan v. State*, CV-2023-2762 (Dist. Ct. Okla. County 11/20/2023) - A retired Oklahoma public employee is challenging the state Energy Discrimination Elimination Act which prohibits divestment of fossil fuels and environmentally focused investment decisions. The retiree claims that it will cause multi-million-dollar damage to the system and that the passage of the act conflicts with the constitutional provision stating that the pension plans are to be operated for the exclusive benefit of the members and beneficiaries. In May 2024, the court blocked the enforcement of the law. The injunction is currently being appealed.
6. *Held v. State of Montana*, 419 Mont. 403, 560 P.3d 1235 (2024) - A group of youths in Montana challenged a similar law prohibiting divestment of fossil fuels contending it violated the state constitutional right to a clean and healthy environment. After a lengthy trial, the youths prevailed, and the law was declared invalid. On appeal, the Montana Supreme Court in December 2024 affirmed the trial court decision finding that the law was not narrowly tailored to protect property interests and was an unconstitutional violation of the right to a clean environment.
7. *Abdullah v. Paxton*, 2022 WL 127204, 2022 WL 127204, aff'd 65 F.4th 204 (5th Cir. 2023) - A participant in two Texas public pension funds filed suit seeking to declare invalid Texas' anti-BDS law. BDS is a political movement calling on investors to boycott, divest and sanction Israel. (Virginia considered but did not adopt HB 1898). The Texas participant claimed the anti BDS law infringed on his rights of free speech. The trial court rejected the argument saying the member cannot assert the Board's rights and that his benefit was not dependent on the assets. The case was affirmed by the U.S. Court of Appeals.

V. WHAT ARE THE ESSENTIAL PRINCIPLES OF SYSTEM GOVERNANCE?

- A. Appointment and terms of trustees - Trustees are appointed or elected in accordance with state law. But all trustees have the same duty to the System and its members, without regard to the constituency that placed them on the Board.
- B. Role of the Board - It is important for the Board to appreciate its role as a policy maker and a policy enforcer through accountability. Both staff and outside consultants have specific roles in the delivery of services to the System and its members.
- C. Best Practices - While there is no specific legal definition of “best practices,” the Board has a duty to establish policies related to all aspects of fiduciary management. The Board should engage in a dynamic program of strategic planning which includes measuring accountability, delegation of authority and succession planning. What is the best practice for one fund, may not be best for all.
- D. Do not micro-manage your staff. Between the development of policy and the measuring of accountability, those tasks belong to system staff and outside advisors.
- E. Is anything ever de minimis from the Board’s perspective?

VI. THE COMMON SOURCES OF LIABILITY AND HOW TO AVOID THEM

A. Contract Liability

The Board’s obligations under the System are largely deemed contractual. Contracts can be expressed or implied. Virginia has waived sovereign immunity for an express contract. It has not waived sovereign immunity for an implied contract. While

Virginia courts have not addressed this distinction as related to retirement, other states have.

In *City of Miami Firefighters and Police Officers Retirement Trust v. Castro*, 279 So.3d 803 (Fla. 3d DCA 2019), a group of retired Miami city police officers sued the pension board alleging that fund staff failed to properly advise them on whether they should retire/enter DROP in a time of fiscal emergency facing the employer. The retirees claimed negligence and breach of contract. The plaintiffs failed to give written notice under the state waiver of sovereign immunity law on a timely basis and all negligence counts were dismissed based on statute of limitations. The board moved to dismiss the contract count arguing that nothing in the pension ordinance created an express contractual obligation on the pension board to counsel members on when to retire. Because any contract was implied, the board argued it enjoyed sovereign immunity. A trial court denied the motion and the board appealed. The appeals court reversed. It found that while sovereign immunity was waived for express contract, the state had never waived sovereign immunity for implied contracts and the appeals court ordered the case dismissed.

B. Tort Liability

Tort claims against the Commonwealth, which would include the Retirement System as governed by the Virginia Tort Claims Act, Va. Code § 8.01-195.1. The amount of tort claims have a dollar cap of \$100,000 or the maximum limit of liability insurance, whichever is greater. Tort claims against a retirement plan would generally arise from negligence. This can take the form of misdirected payments, bad advice to participants affecting their retirement and employment choices, and the release of confidential information which resulted in financial or reputational damage. Individual trustees have immunity provided by the retirement statute.

Liability also does not arise if the decision allegedly causing damage is a governmental action rather than a proprietary action. The former is a discretionary exercise or non-exercise of governmental power. A proprietary action is one which can be performed by a private person and is not specifically an exercise of a unique governmental power.

While Virginia courts have yet to address this issue, other state courts have. There have been many instances in which participants have been incorrectly counseled regarding their retirement eligibility. Where such an event caused a retiree to leave employment before eligibility was achieved held required to grant retirement benefits. *Kuge v. State*, 449 So.2d 389 (Fla. 3d DCA 1984). But governmental immunity did protect municipal pension trustees who failed to detect multi-million-dollar theft by pension administrator. *Potter v. Springfield Township*, 681 A.2d 241 (Pa. Cmwlth. 1996).

C. Civil Rights Claims

There are two general sources of liability: due process and discrimination. Due process claims arise when there is a failure to accord notice and an opportunity to be heard before final action is taken. Generally, those will be resolved in the administrative hearing process.

On a System-wide basis liability can arise from discrimination claims on the basis of age, race, gender, or disability. Federal disability and age cases cannot be brought against a state by an individual because of the 11th Amendment of the U.S. Constitution. The EEOC can, and has brought such claims, with multi-million-dollar potential liability. Compare, *Kentucky Retirement Systems v. EEOC*, 554 U.S. 135 (2008) and *EEOC v. Baltimore County*, 747 F.3d 267 (4th Cir. 2014).

D. How does a Prudent Trustee Avoid Liability Claims?

1. Be consistent. It is important that decision making be founded on the statutes and operational rules of the

plan. If a policy is proving ineffective; change the policy as provided by law. Don't ignore the rule.

2. Be prepared. A trustee has a duty to be fully informed on all issues upon which a vote will be required. It is not a trustee's job to perform the work of the staff, but it is essential that trustees review staff submissions to them and understand the issues.
3. Be curious. Ask questions. Trustees often hesitate to ask questions for fear of appearing uninformed. It is actually the opposite. Staff should not assume that trustees are at the staff level of information and have a duty to impart information to trustees in an effective and useful manner. Conversely, trustees have a duty to be honest with themselves and staff in assuring full understanding of issues upon which trustees will ultimately be called upon to vote.
4. Make use of your professionals. Trustees are specifically permitted by statute and by the common law to rely on the advice of their investment, actuarial, and legal professionals. It is unwise to substitute your own knowledge for that of staff or outside advisors. Use your knowledge and experience to employ the advice and information provided. If the trustee acts based his or her own view or preconceptions, that individual may effectively substitute themselves as the "expert" and undermine the discretionary immunity provided by law.
5. Be engaged. Acting as a fiduciary for multi-billion-dollar enterprise affecting the lives of virtually every public officer and employee (and their families) in Virginia is an awesome responsibility. The seriousness of the duties of a trustee cannot be understated. Often, listening to or mastering complex investment or actuarial concepts requires real work and real effort. In the same way the

membership serves the citizens of Virginia through the performance of a myriad of jobs and offices, the Board serves the members with a singular purpose – to provide a secure retirement through a well-financed and well managed pension system. The honor be of being a trustee is not in the appointment to the board; the honor is fulfilling the duties incumbent on being a trustee.

VII. HOW HAVE THESE BEEN APPLIED IN PRACTICE?

A. The Assets belong to the System

In *Municipality of Anchorage v. Gallion*, 944 P.2d 436 (Alaska 1997), the court considered the use of surplus assets in the retirement system as related to employer contributions. The Anchorage plan had three tiers of benefits based on date of hire. Plans I and II were significantly overfunded and required neither employee or employer contributions. Plan III was not fully funded. The employer applied the surplus in Plans I and II to avoid a contribution to Plan III. Even though assets were co-mingled for investment purposes, the board of trustees treated each plan separately for actuarial purposes. The members of plans I and II sued claiming assets reserved for their benefit were being used by the employer. The Alaska Supreme Court agreed and found that the exclusive benefit rule prevented their use for the benefit of Plan III. At the same time, a claim was made by Plan I and II members for additional benefits based on the funding levels. The court rejected that claim as well, finding that the benefits are set by ordinance and while the assets were to be dedicated for the exclusive use of Plan I and II members, a surplus did not entitle them to an increase absent a change in the plan.

B. In a Defined Benefit Plan the Actuarial Needs dictate the Employer Contribution

Traditionally, the employer contribution in the Louisiana Firefighters Retirement System (FRS) has been 9% of payroll. The dot-com era investment losses severely affected the plan's assets, and the next ensuing actuarial valuation required a 27% of payroll contribution by the employers. The employers refused to pay, claiming they did not have a responsibility beyond the customary 9%. In *Louisiana Municipal Association v. State*, 893 So.2d 809 (La. 2005), the Louisiana Supreme Court disagreed holding that in a defined benefit plan, the employer is the ultimate guarantor of the plan and when investment return declines, the employer costs increase. Conversely, when investment return exceeds expectations, the employer cost declines. This is consistent with the U.S. Supreme Court ruling in *Hughes Aircraft Co. v. Jacobson*, 525 U.S. 432 (1999), allowing Hughes Aircraft to retain the surplus in a terminated plan. But see, *Government Employees Retirement System v. Government of the Virgin Islands*, 995 F.3d 66 (3d Cir. 2021) where the court declined to order the territorial legislature to appropriate actuarially required contributions.

C. Actuarial Sleight of Hand Can Create Trustee Liability

The California Constitution, Article XVI, § 17 establishes a fiduciary standard for trustees for public pension funds. A group of county employees filed suit against the county and the retirement board for breach of fiduciary duty by reducing employer contributions and placing the employer's needs ahead of the members' right to the exclusive use of assets. The facts showed that the board lowered the employer contribution by crediting excess funds not used for actuarial valuation purposes to the employer in order to preserve member jobs from layoff or elimination. An appeals court found that this stated a cause of action and remanded the case back for trial. *O'Neal v. Stanislaus County Employees*

Retirement Association, 8 Cal. App. 5th (2017). After two more trips to the appeals court and a lengthy trial judgment was ultimately entered for the retirement system, but which resulted in substantial litigation costs. *O'Neal v. Stanislaus County Employees Retirement Association*, 2021 WL 5817325 (Cal. App. 2021) (unpublished).

D. Due Process Violation Can Invalidate Board Action

An Illinois retirement board allowed the employer to intervene in the board's consideration of a disability claim by a firefighter. At the hearing, the board permitted the city attorney, who was also a trustee, to object to evidence from the firefighter and to question witnesses. As a result, the disability application was denied. On appeal, the court reversed the denial finding that allowing a trustee to participate as the lawyer for the intervening employer established that he was not a neutral decision-maker and denied the applicant due process. The essence of due process in proceedings to consider benefit applications is a right to be heard and to have the decision made by a disinterested party. *Williams v. Board of Trustees*, 924 N.E.2d 38 (Ill. App. 2010).

E. Trustees' Actions Prolonging Litigation Warranted Court Cost Assessment

The widow of an El Paso police officer killed in the line of duty was erroneously awarded a 100% benefit rather than the proper statutory amount of two-thirds of the officer's pay at time of death. Seventeen years after the award of 100% was granted, the Board corrected the amount and sought to recover overpayments. The widow sued the Fund, and the case was ultimately dismissed on sovereign immunity grounds. *City of El Paso v. Heinrich*, 284 S.W.3d 366 (Tex. 2009). The widow then sued the trustees individually claiming their actions were *ultra vires* (contrary to their statutory authority). After 13 years of prolonged litigation, the court ultimately found the trustees had the authority to

adjust the erroneous benefit. However, the court also found that the trustees actions unnecessary prolonged the litigation and awarded court costs to the widow even though the trustees were the prevailing parties. *Heinrich v. Calderazzo*, 569 S.W.3d 247 (Tex. 2018)

F. Approval of Actuarial Valuation Led to Criminal Prosecution

The City of San Diego and its unions negotiated benefit changes to the retirement plan and included actuarial funding methods to ameliorate the city cost. As required by the city code, the board of trustees, half of whom were plan members, provided for and approved an actuarial impact statement. As a result of the participation of plan member trustees, those individuals were indicted for violating the criminal provisions of the state conflict of interest statute because they, like all of the other 10,000 plan members, received a benefit increase as a result of the labor negotiation. After five years of litigation, the California Supreme Court ultimately reversed earlier rulings to the contrary and dismissed the indictments, finding that the board members received no greater benefit than any other participant and by statute had a duty to vote on the actuarial valuation. While the state court proceedings were pending, the trustees also were indicted on federal mail and wire fraud violations. Following the Supreme Court decision, those charges were dropped. The unfortunate consequence is that the indicted members lost their jobs; many declared bankruptcy and several were divorced by their spouses due to the strain and cost of the defense. *Lexin v. Superior Court*, 222 P.3d 214 (Cal. 2010).

VIII. FORFEITURE OF BENEFITS

- A. Va. Code § 51.1-124.13 provides for loss of benefits for conviction of a felony relating to misconduct on the job.
- B. This applies to events occurring on or after July 1, 2011.
- C. The duty to report the conviction is on the employer and subject to appeal by the plan participant. The employer has no discretion concerning the initiation of the forfeiture process. The determination as to the legality of the employer action shall be determined by the circuit where the employer is located.
- D. *Moser v. Halifax County and Virginia Retirement System*, 2024 WL 4381165 (W.D. Va. 10/3/24). Sammie Moser was a 26-year member of the retirement system in VRS-covered law-enforcement jobs. In 2022, he was convicted of embezzlement from the Halifax County Animal Shelter. The employer determined that the felonies arose from Moser's employment and initiated the forfeiture process. He challenged the statute on due process and excessive fines grounds under the 14th and 8th amendments of the U.S. Constitution. The circuit court affirmed the forfeiture. Moser appealed to the Virginia Supreme Court which dismissed the appeal on jurisdictional grounds as the statute makes the circuit decision final and non-appealable. The U.S. Supreme Court declined review. Moser filed suit in the U.S. District Court on the same constitutional grounds. A motion to dismiss was filed by the Board of Supervisors on the grounds of lack of subject matter jurisdiction and failure to state a claim. The district court denied the jurisdictional defense and but granted the defense of failure to state a claim on the basis of res judicata – meaning the exact constitutional claim has already been judicially resolved. In an earlier version of the forfeiture statute, a federal court found a lack of jurisdiction and want

of a federal question. See *Garraghty v. Virginia Retirement System*, 200 Fed. Appx. 209 (4th Cir. 2006).

The Board of Supervisors was also found not to be a proper party to the claim, as control of the forfeiture process rests with VRS. As such the Board of Supervisors was dismissed. The claim against the System remains.

E. How Have Similar Cases been Resolved by Other Courts

Forfeiture statutes have been repeatedly challenged as violation due process rights (14th amendment), property rights (5th amendment), impairing the obligation of contract (10th amendment), and excessive fines (8th amendment). Those complaints have been repeatedly rejected by the courts.

Courts have held that participation in the retirement system is part of the employee's contract of employment. Just as payment of retirement benefits when due is part of the employer's obligation under the contract, faithful and honest service by employees is their obligation under the contract. As a result of the felonious activity, the employee has breached his or her obligations under the contract and forfeits the benefit. This is not a punishment or fine for the crime; it is a contract claim.

On impairment of contract grounds, the requirement of faithful and honest service is an essential element of the contract. The Virginia statute only applies to actions occurring after the adoption of the statute in 2011. The requirement of faithful and honest service on a prospective basis became an essential element of the contract.

Due process generally refers to the right to be heard and have a claim decided by a neutral magistrate. In the case of a felony forfeiture, the employee will have been afforded due process in the criminal proceedings and the statute provides the opportunity for judicial review of the forfeiture decision by the

circuit court. In both cases, a neutral magistrate has decided the ultimate question.

Two important issues in the success of forfeiture cases is a nexus to the job between the felony and the public office or employment. An additional issue is the interest on an innocent spouse in the benefits of the member. Are the rights derivative of member or are they separate property? Va. Code § 20-107.3 makes retirement benefits marital property capable of equitable distribution.

A number of states allow proportional forfeiture which is determined based on the seriousness of the crime and its economic impact on the employer. Recently, forfeiture statutes have been amended to add sexual misconduct connected with the job as a basis for forfeiture.

F. Illustrative Cases

Ryan v. Board of Trustees, 924 N.E.2d 970 (Ill. 2010) – Former Governor convicted of racketeering. Prior to that office, Governor held multiple state positions. Even though felony was for a specific office Supreme Court held that forfeiture was total.

Childers v. State, 989 So.2d 716 (Fla. 4th DCA 2008) - Former state senate president following 30 years on the legislature, later was elected to his local school board. He was convicted of bribery in connection with the school board job, yet his entire pension was forfeited including from his service a schoolteacher decades before. The Florida court upheld the forfeiture based on the member's breach of contract for faithful and honest service as public officer or employee. Since the pension plan covered all of his service, all benefits were lost.

Bulger v. State Board of Retirement, 25 Mass. L. Rptr. 359 (Mass. Super. 2009) – Court clerk convicted of perjury arising from clerk's knowledge of his brother's location during a fugitive search. Clerk claimed forfeiture was grossly excessive. Court noted that proportionality is the key element in a forfeiture. Court

found clerk's interference with administration of justice warranted complete loss of benefits.

Bollone v. Dept. of Management Services, 100 So.3d 1276 (Fla. 1st DCA 2012) – Public employee found to be in possession of child pornography on his work computer and viewing same during working hours. Court found that the employee misused his public employment for personal gain and gratification and forfeiture was warranted. But, compare, *Retirement Board v. Tyler*, 981 N.E.2d 740 (Mass. App. 2013) – off duty firefighter accused of child sexual abuse. None of the crimes occurred on duty, or at a fire station, or involving the use of department uniforms, identification, or equipment. Court found absence of a job nexus and reversed order of forfeiture.

Thornsbury v. W.Va. Consolidated Retirement Board, 2018 WL 798420 (W.Va. 2018)- state court judge convicted of federal crimes by promising inmates lighter sentences if they refused to testify against the judge who was the subject of a criminal investigation. The forfeiture was upheld based on the determination that judge's pension vested subject to completion of his public service in a lawful manner. The judge's former wife claimed a marital share of the forfeited pension as an "innocent spouse." Her claim was denied by the Court which found the spouse's interest in the retirement benefit was solely derivative of her former husband and his forfeiture erased any interest she could have claimed.

U.S. v. DeCay, 620 F.3d 534 (5th Cir. 2010)- A pair of Orleans Parish deputy sheriffs were convicted of running a mail fraud scheme from the Parish prison. Under federal law, each was served with a writ of restitution under 18 U.S.C. 3613. Under that federal statute, state law protections against claims of creditors was deemed pre-empted and garnishment of the one deputy in receipt of benefits was permitted at the statutory rate of 25%. The other deputy had his entire contribution account

seized which eliminated any right to a future retirement benefit under the terms of the Sheriffs' Pension Fund.

IX. WHAT HAVE WE LEARNED?

- A. In large measure fiduciary duty is common sense about right and wrong. If an issue gives one pause for thought that it might be wrong, it probably is. The primary duty of a pension fiduciary is to act in the best interests of the members and beneficiaries of the System. Only if that result abides, do additional concerns enter the decision process.
- B. Liability is largely the product of poor planning and a failure to recognize its consequences. Every decision of consequence needs to be fully vetted in advance and that process includes following the potential for liability through the stages likely to occur and the anticipated cost if litigation occurs.
- C. Pension trustees have 2 jobs - (1) set policy and (2) demand accountability that the policy is being properly executed.
- D. Understand the subject matter. Ask appropriate questions to get an answer. The increasingly complexity of investments demands increased study and due diligence. This responsibility cannot be abdicated by silence or reliance on the hope that fellow trustees will guide the decision. Each trustee must take ownership of his or her decisions.
- E. Delegation to staff and professionals IS the exercise of fiduciary duty if there is continuing accountability.
- F. Micro-management and policy making are poor partners and are NOT the appropriate exercise of fiduciary duty. Trustees who insert themselves in day-to-day operation of the System increase the likelihood of costly litigation and allowing the courts, rather than the board to be the final authority in the operation of the system. Additionally, displacing the staff in these implementation decisions raises the likelihood of a

trustee being individually named as a party in litigation. Even though there are substantial sovereign immunity and discretionary immunity protections, those apply to the prudent exercise of trustee responsibility and not usurpation of the role of staff in policy implementation.

IF YOU HAVE ANY QUESTIONS OR COMMENTS CONCERNING THIS PRESENTATION, CONTACT ROBERT D. KLAUSNER, ESQUIRE, KLAUSNER, KAUFMAN, JENSEN & LEVINSON, 7080 N.W. 4TH STREET, PLANTATION, FLORIDA, 33317, (954) 916-1202, FAX (954) 916-1232, EMAIL bob@robertdklausner.com, WEBSITE: www.klausnerkaufman.com

Welcome

A. Scott Andrews
Chairman,
VRS Board of Trustees



Guest Speaker: Decision Making

Michael Mauboussin
Head,
Consilient Research
Counterpoint Global

Morgan Stanley



Guest Speaker: Decision Making

Michael Mauboussin | Morgan Stanley



Michael Mauboussin is Head of Consilient Research for Counterpoint Global. He joined Morgan Stanley in 2020 and has 39 years of investment experience. Prior to joining the firm, he was director of research at BlueMountain Capital Management, head of global financial strategies at Credit Suisse, and chief investment strategist at Legg Mason Capital Management. Additionally, Michael is an adjunct professor of finance at Columbia Business School and chairman emeritus of the board of trustees at the Santa Fe Institute. Michael earned an A.B. in government from Georgetown University.

Optimizing Decision-Making in Investment Teams

Michael J. Mauboussin

Head of Consilient Research

Counterpoint Global, Morgan Stanley Investment Management

March 2025

Agenda

- **Methods to improve decisions**
 - Base rates
 - Premortems
 - Red teams
- **Documentation for accountability and learning**
- **Building an effective team**
 - Size
 - Composition
 - Management

Inside versus Outside View

Inside

(your understanding)

versus

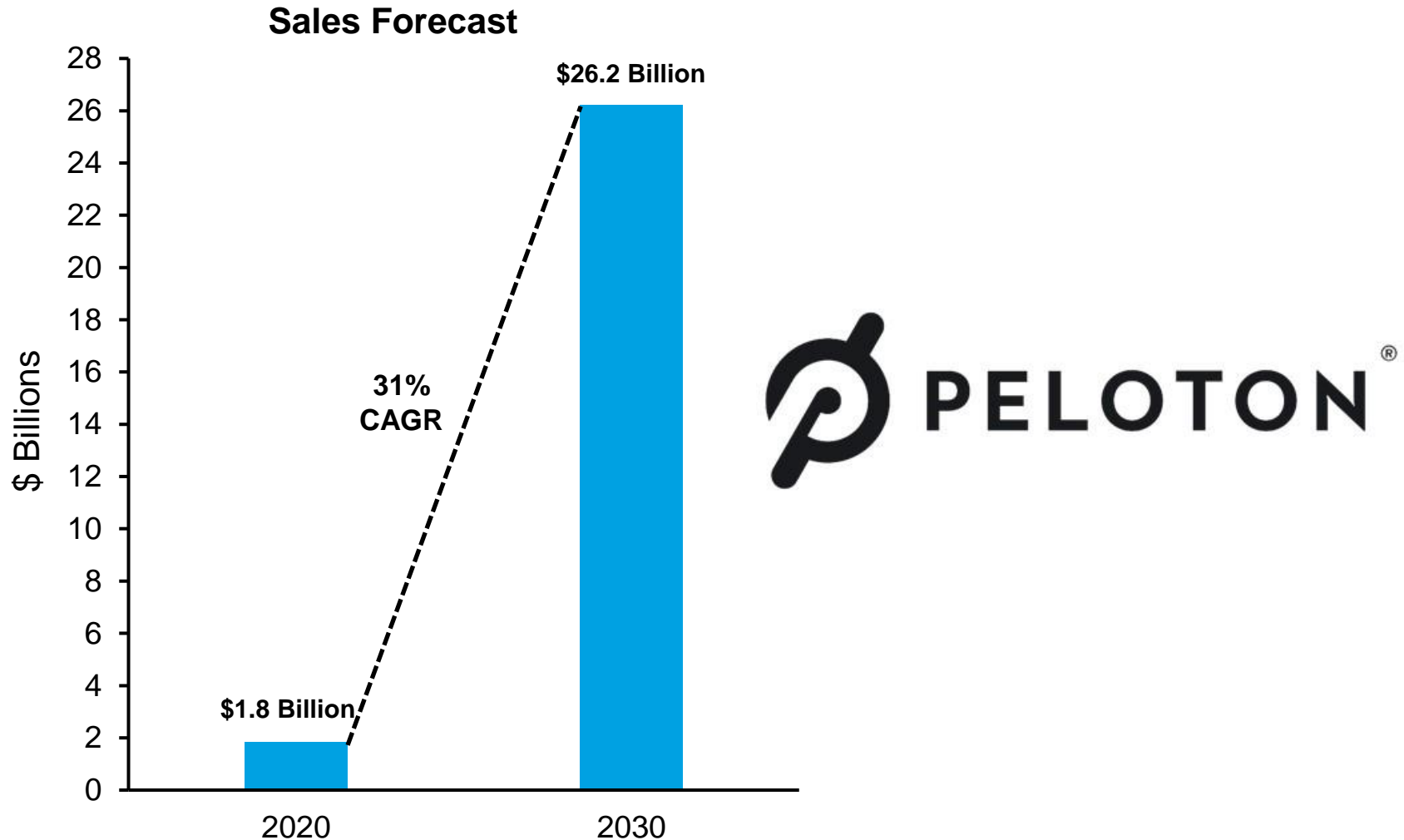
Outside

(base rate)



Source: Picture of Daniel Kahneman by Eirik Solheim.

Inside versus Outside View

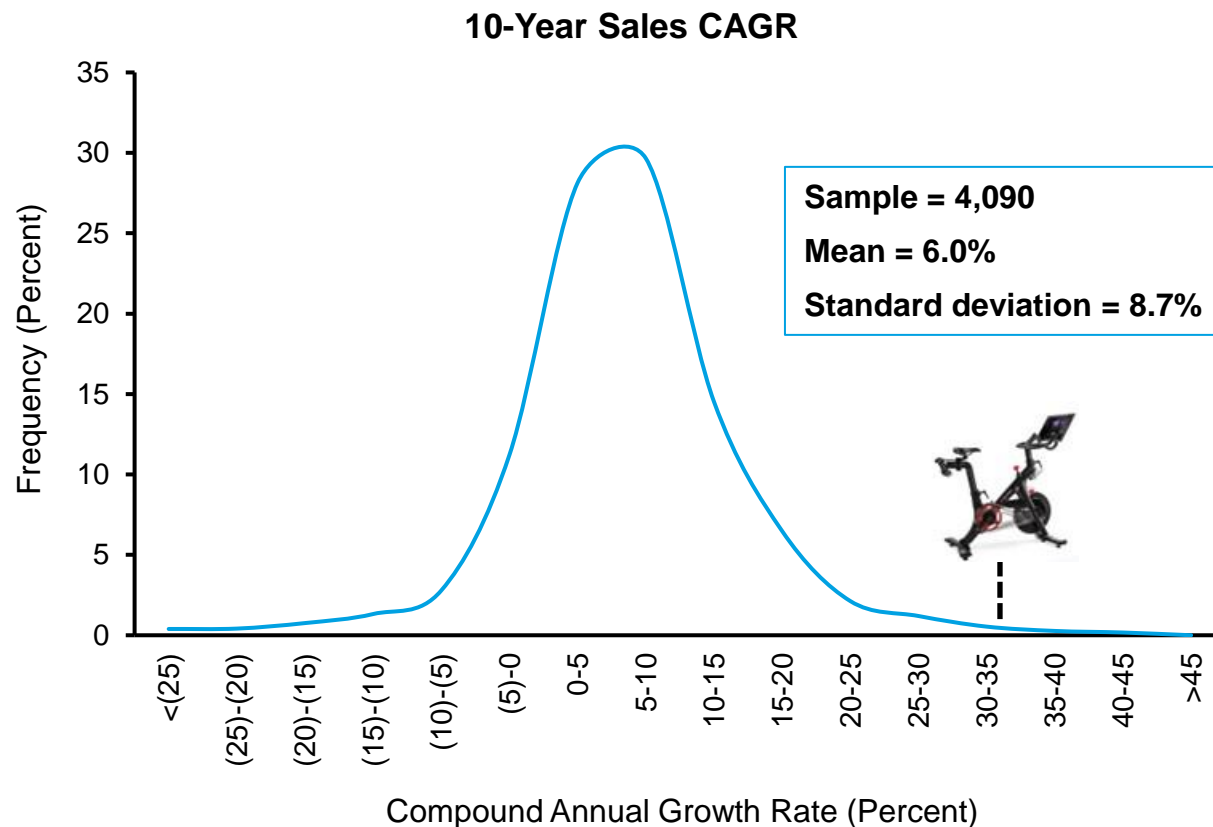


Source: (Left) John Blackledge et al., "Peloton Interactive: PTON F4Q20 Review: Another Beat & Blowout FY21 Guide; PT to \$125," *Cowen Equity Research*, September 11, 2020; (Right) By Source (WP:NFCC#4), Fair use, <https://en.wikipedia.org/w/index.php?curid=58064896>.

Note: CAGR=compound annual growth rate; forecasts herein are subject to change and may not actually come to pass.

Inside versus Outside View

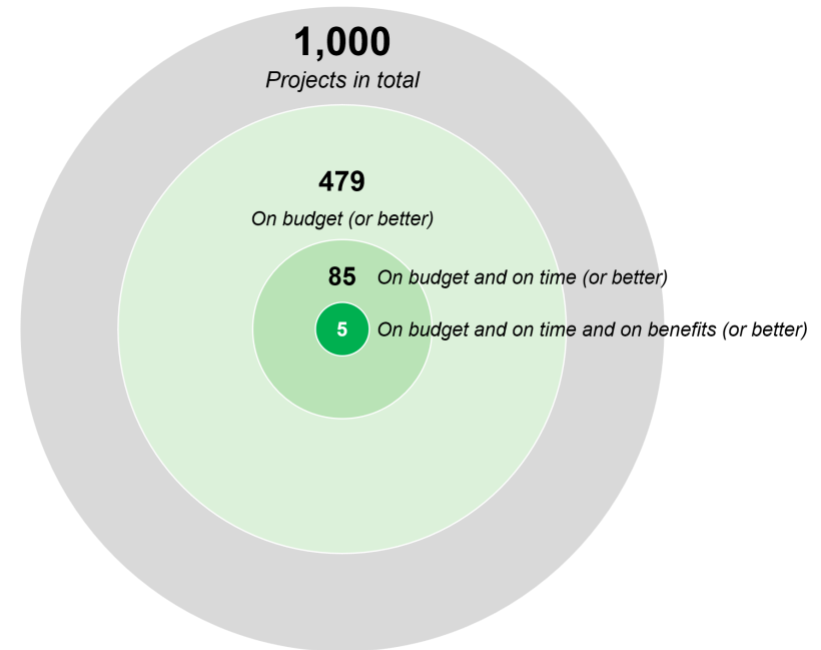
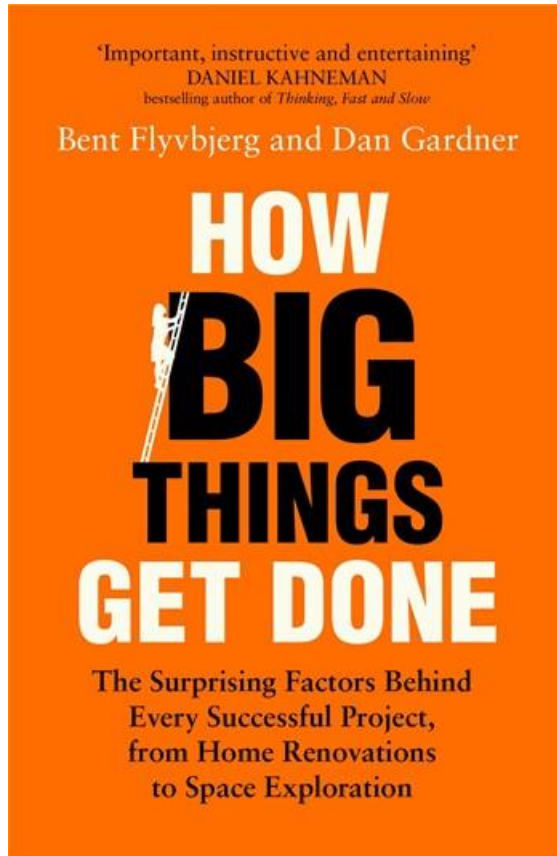
“People who have information about an individual case rarely feel the need to know the statistics of the class to which the case belongs.”



Source: Daniel Kahneman, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2011), 249; FactSet; Counterpoint Global.

Note: CAGR=compound annual growth rate; growth rates are nominal; Russell 3000 companies with beginning year sales of \$1,250-2,000 million (in 2020 U.S dollars), 1984-2020.

Inside versus Outside View



Source: data from Chapter 1 of the Book: "*How Big Things Get Done*" by Bent Flyvbjerg, Dan Gardner. Graph recreated by Yi Bao on LinkedIn

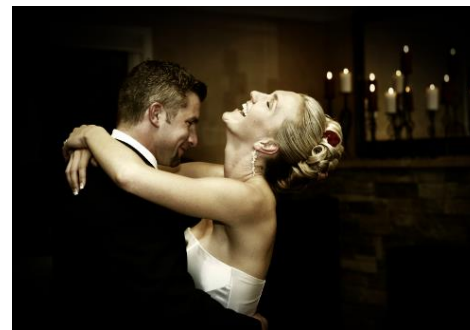
Source: Bent Flyvbjerg and Dan Gardner, *How Big Things Get Done: The Surprising Factors Behind Every Successful Project, From Home Renovations to Space Exploration and Everything in Between* (New York: Currency, 2023), 8.

Why the Inside View

Illusion of superiority



Illusion of optimism



Illusion of control



Source: iStock.

Stories versus Statistics

	Success rate	
	90%	30%
Positive anecdote	88	78
Negative anecdote	39	7



Source: Angela K. Freymuth and George F. Ronan, "Modeling Patient Decision-Making: The Role of Base-Rate and Anecdotal Information," *Journal of Clinical Psychology in Medical Settings*, Vol. 11, No. 3, 2004, 211-216.

Premortem



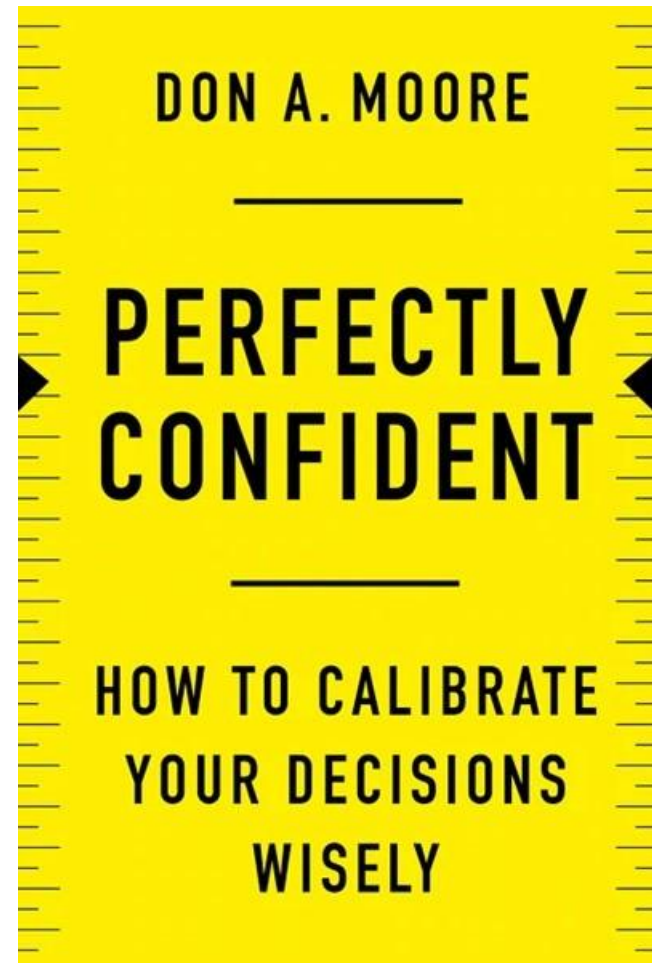
1. Prepare
2. Imagine a fiasco
3. Generate reasons for the failure
4. Consolidate the lists
5. Revisit the plan
6. Periodically review the list

Source: Gary Klein, *Intuition at Work: Why Developing Your Gut Instincts Will Make You Better at What You Do* (New York: Currency, 2003), 88-91. Also, Gary Klein, "Performing a Project Premortem," *Harvard Business Review*, September 2007, 18-19. Image used by permission.

Overprecision

“Overprecision occurs when you are excessively sure that you know the truth. ...reversals of overprecision are vanishingly rare.”

Don Moore



Source: Don A. Moore, *Perfectly Confident: How to Calibrate Your Decisions Wisely* (New York: Harper Business, 2020), 8.

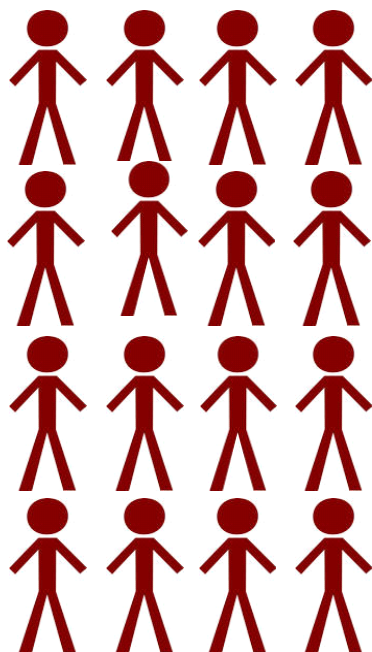
Ulysses Contract



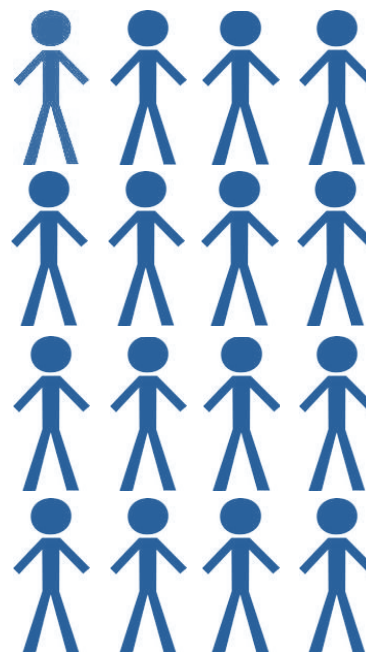
Source: John William Waterhouse, *Ulysses and the Sirens*, 1891.

Red Team, Blue Team

Red Team



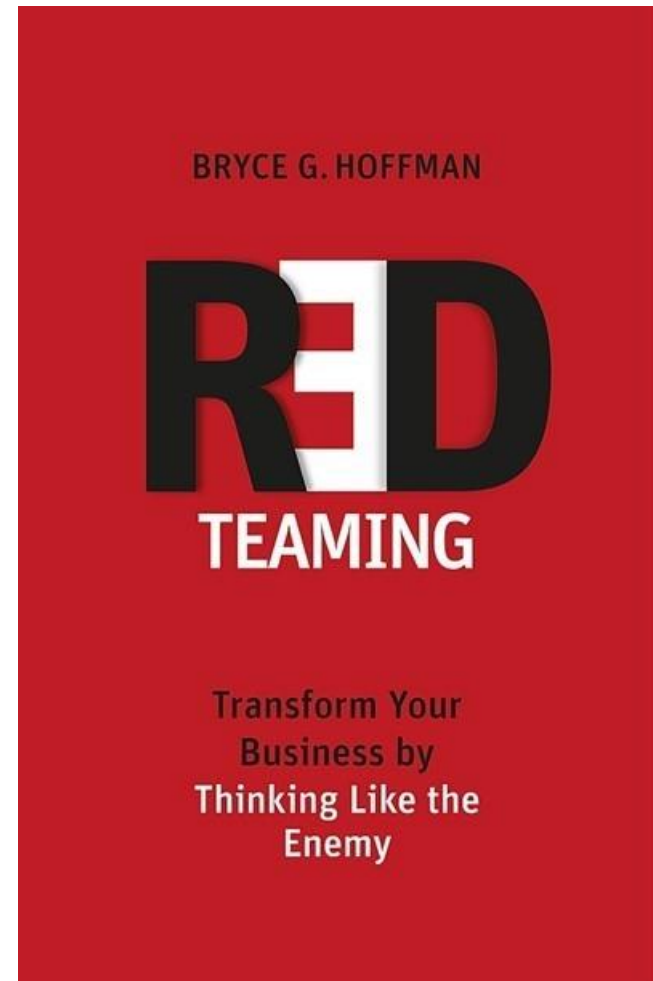
Blue Team



Red Team, Blue Team

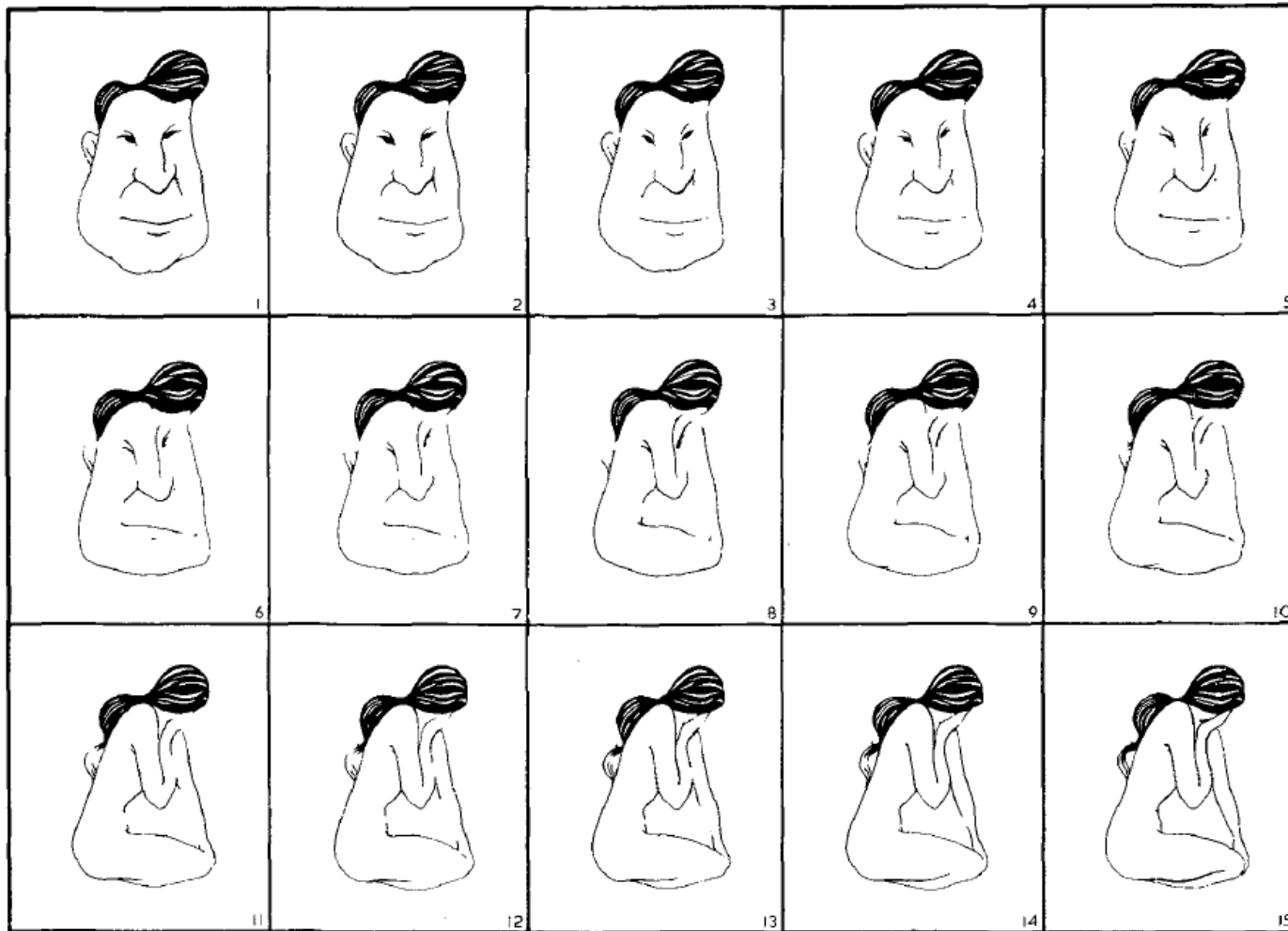
“Red teaming methods correct overconfidence and impulsive decision-making—just what we need today.”

Gary Klein



Source: Bryce G. Hoffman, *Red Teaming: Transform Your Business by Thinking Like the Enemy* (New York Crown Business, 2017).

The Power of Mindset



Source: Gerald H. Fisher, "Preparation of Ambiguous Stimulus Materials," *Perception & Psychophysics*, Vol. 2, No. 9, September 1967, 421-422.

Document Decisions

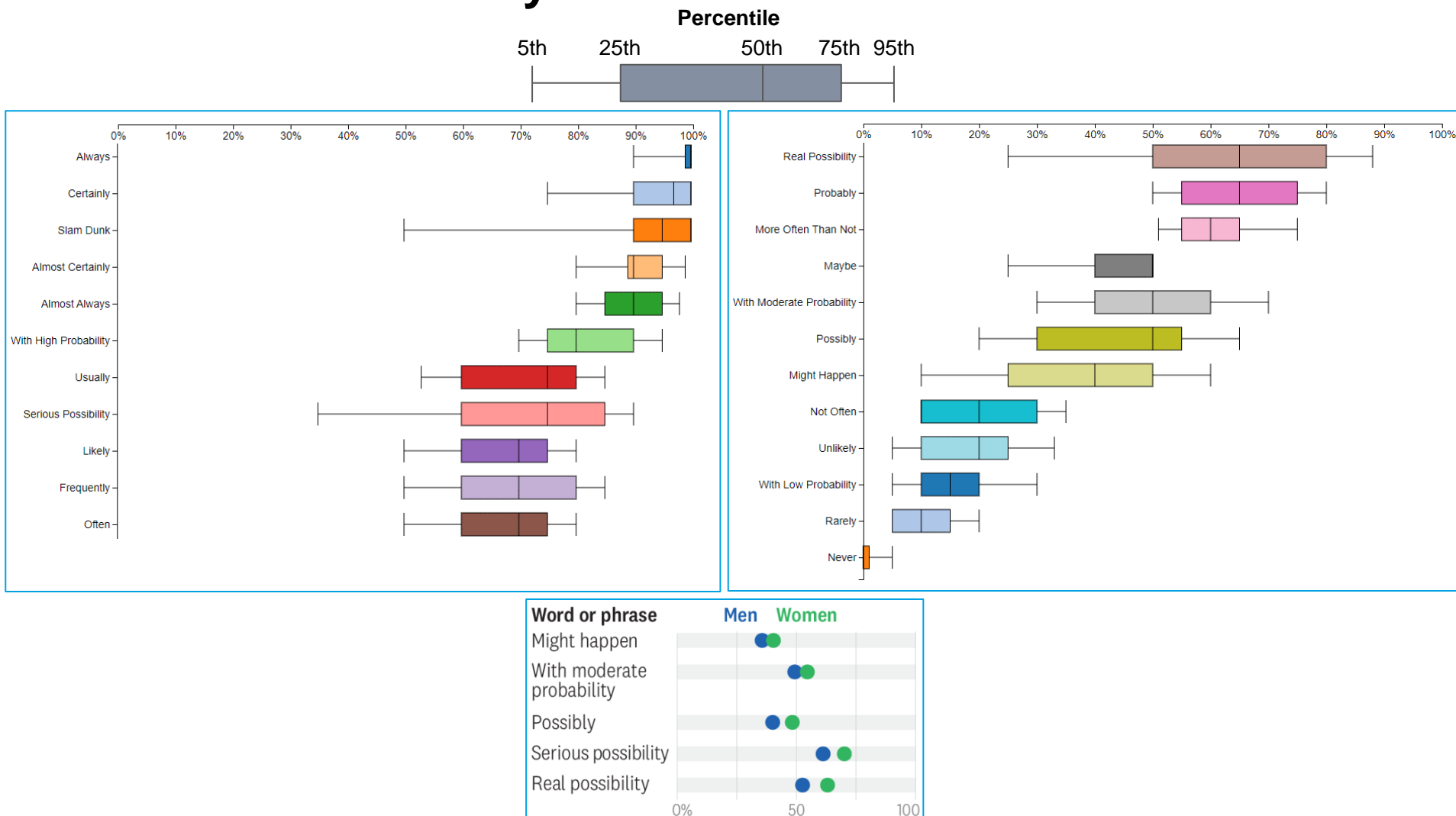
Write down:

- What you expect to happen
- Why you expect it to happen
- Note the date and time
- Jot down how you feel physically and emotionally
- Use probabilities, not words, to express your views



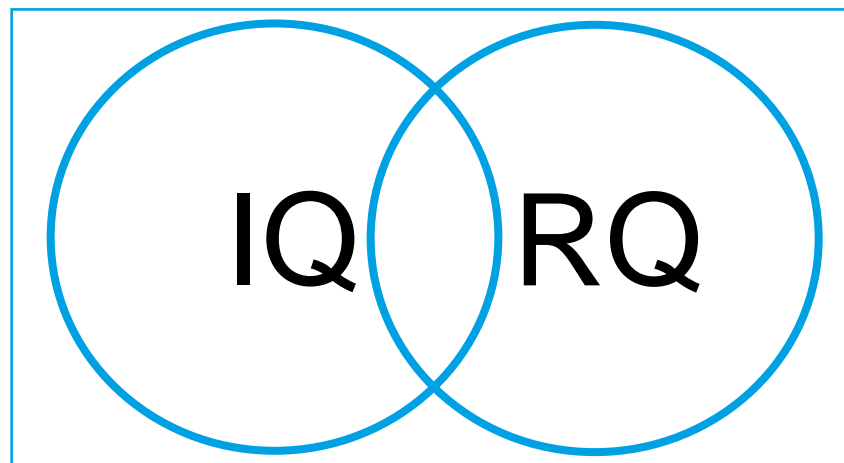
Source: iStock.

Words to Probability



Source: www.probabilitysurvey.com; Andrew Mauboussin and Michael J. Mauboussin, "If You Say Something Is 'Likely,' How Likely Do People Think It Is?" *Harvard Business Review Blog*, July 3, 2018.

Rationality Quotient



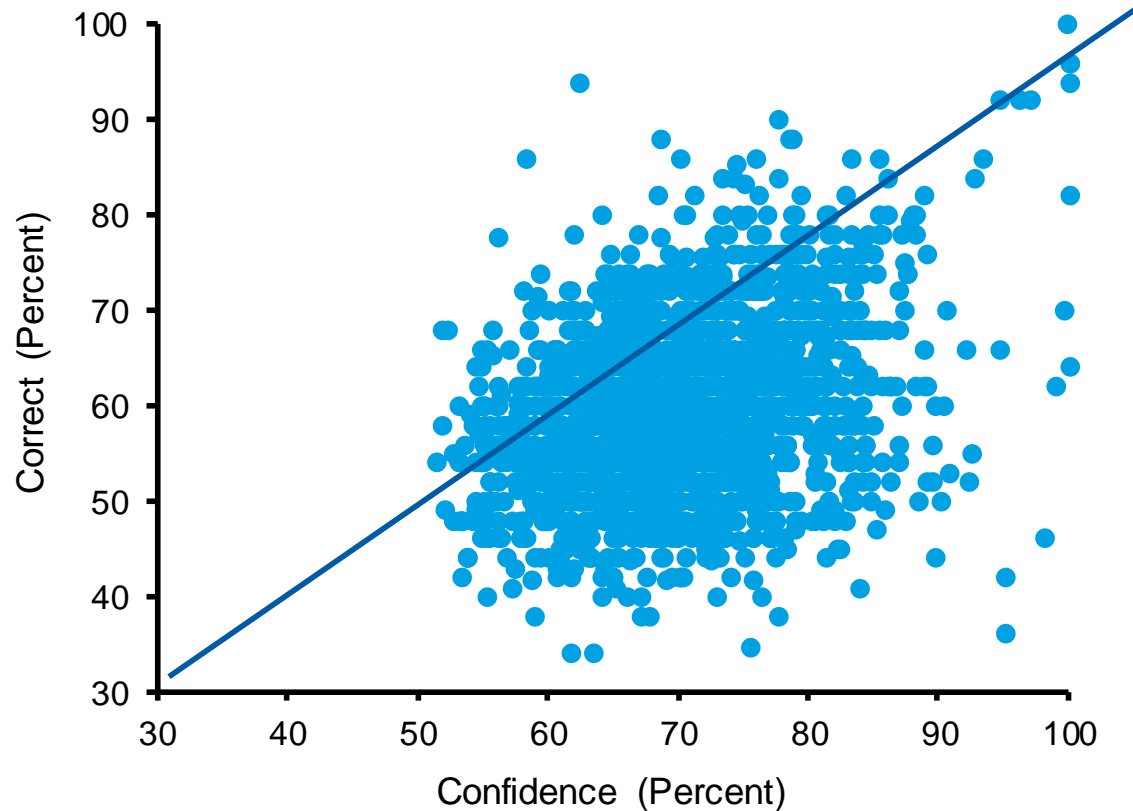
- Instrumental rationality
- Epistemic rationality

“Beliefs are hypotheses to be tested, not treasures to be protected.”

Source: www.keithstanovich.com and Philip E. Tetlock and Dan Gardner, *Superforecasting: The Art and Science of Prediction* (New York: Crown Publishers, 2015), 191.

Calibration and Conviction

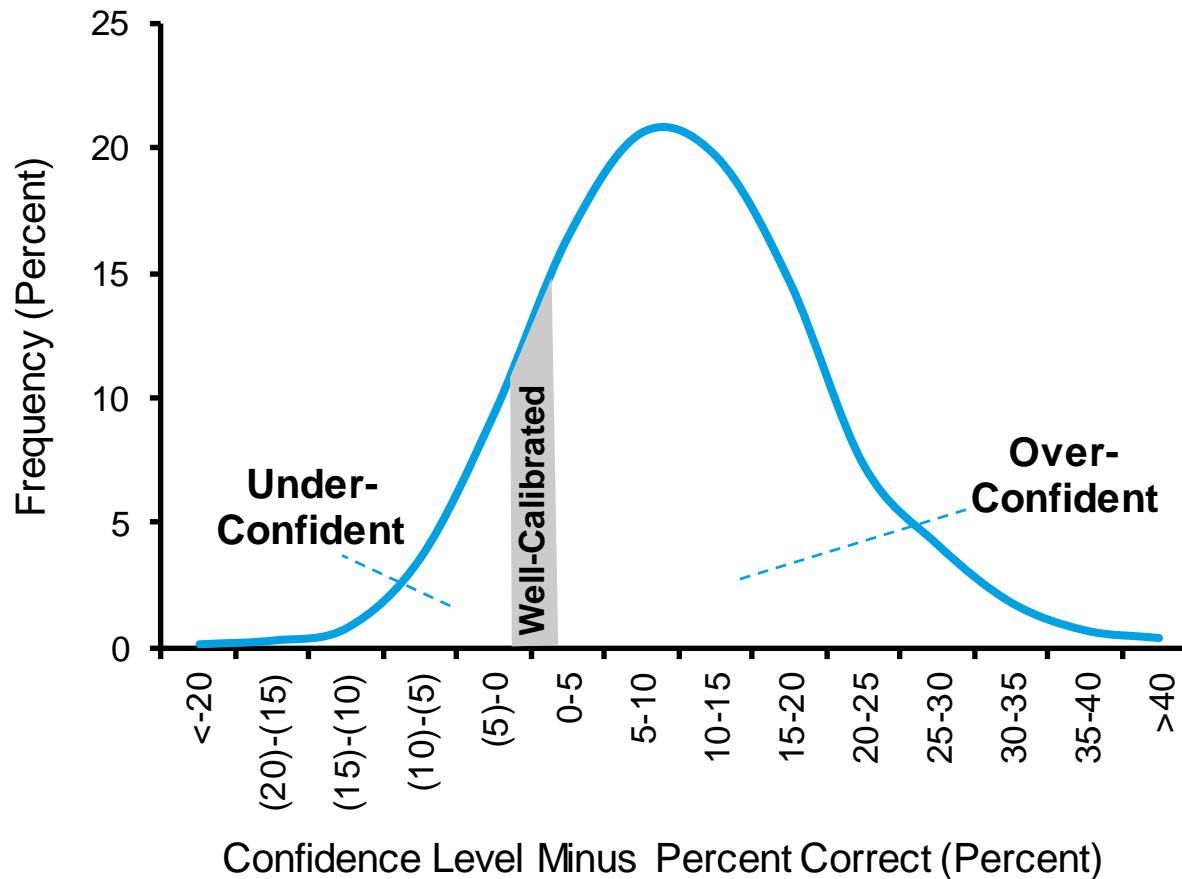
Confidence Calibration Exercise



Source: confidence.success-equation.com and Michael Mauboussin.

Calibration and Conviction

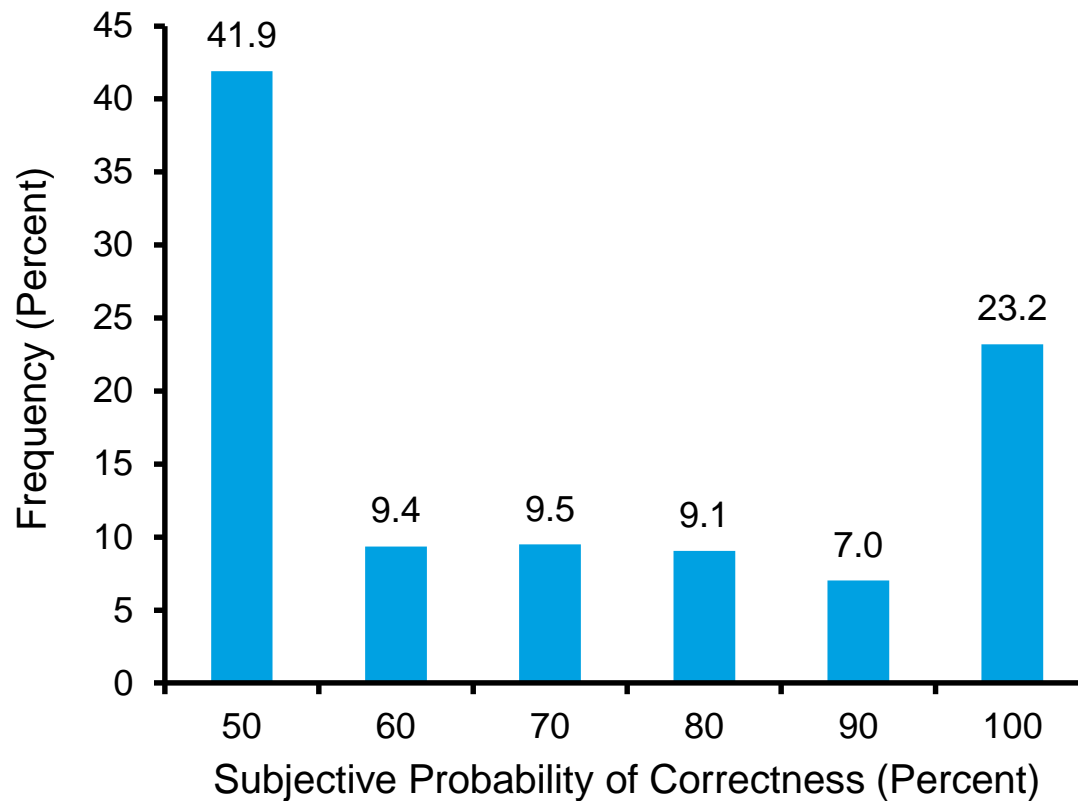
Confidence Calibration Exercise



Source: confidence.success-equation.com and Michael Mauboussin.

Calibration and Conviction

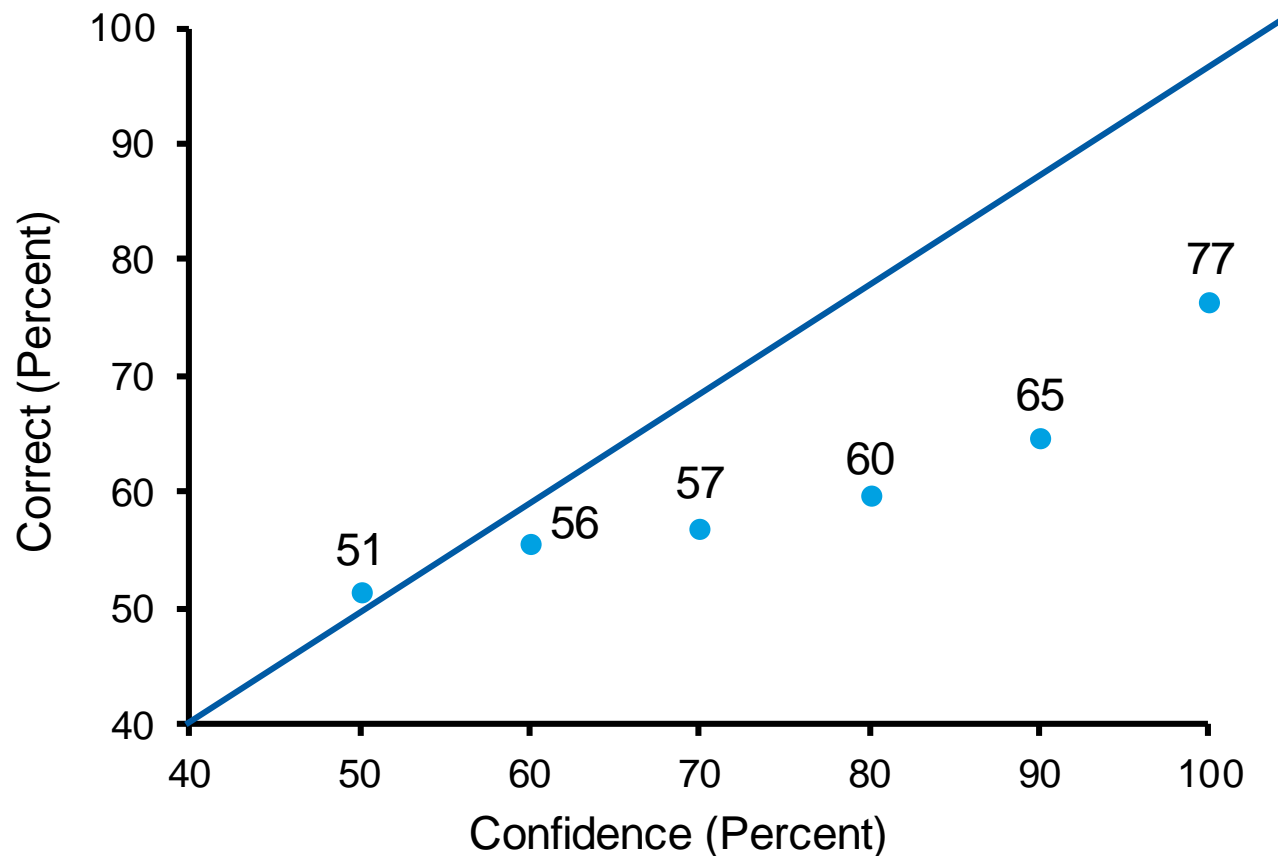
Confidence Calibration Exercise: Distribution of Subjective Probabilities of Correctness



Source: confidence.success-equation.com and Michael Mauboussin.

Calibration and Conviction

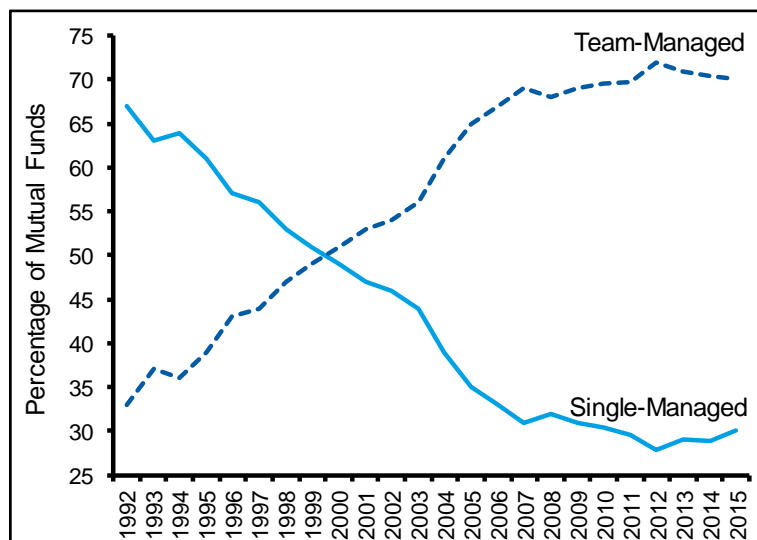
Confidence Calibration Exercise



Source: confidence.success-equation.com and Michael Mauboussin.

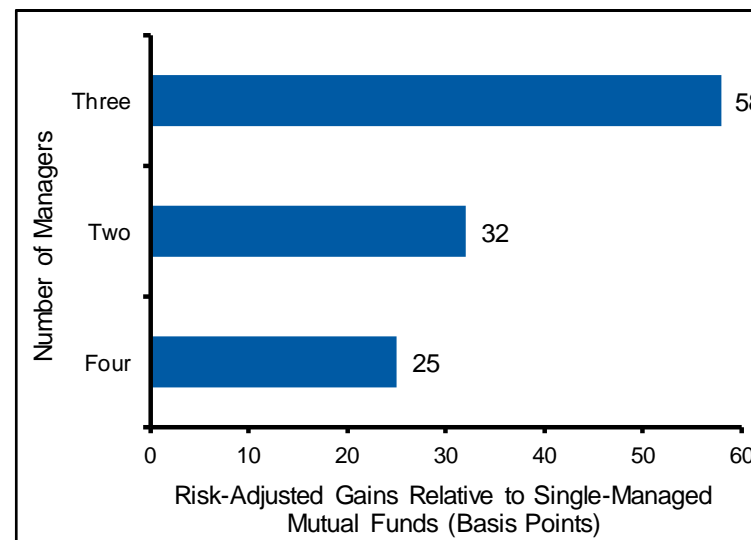
Teams Add Value

Mutual Funds Shift from One to Multiple Managers



Source: (for 1992-2010) Saurin Patel and Sergei Sarkissian, "To Group or Not to Group? Evidence from Mutual Fund Databases," *Journal of Financial and Quantitative Analysis*, Vol. 52, No. 5, October 2017, 1989-2021; (for 2011-2015) Diamond Wang, "What Does It Mean to Be in a Team? Evidence from U.S. Mutual Fund Managers," *Working Paper*, June 17, 2016.

Team-Managed Funds Relative to Single-Managed Funds (Annual)

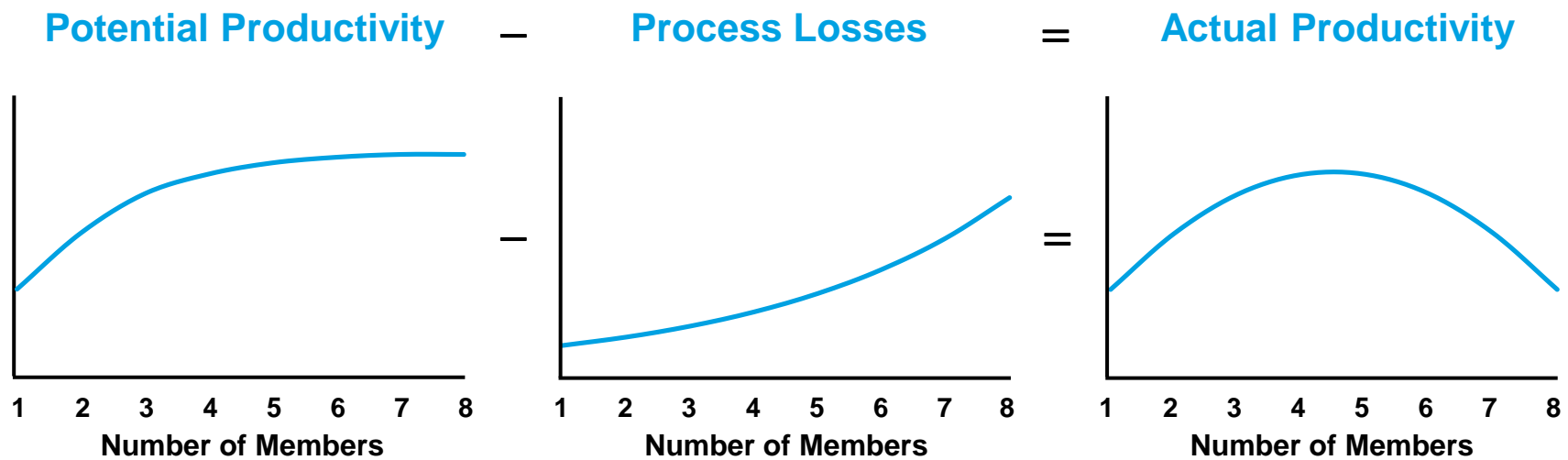


Past performance is no guarantee of future results.

Note: Analysis for 1992-2010.

Source: Patel and Sarkissian.

Team Size



Source: Adapted from J. Richard Hackman, *Leading Teams: Setting the Stage for Great Performance* (Boston, MA: Harvard Business School Press, 2002), 117.

Team Composition

Types of Diversity

Social Category

Age
Race
Gender
Ethnicity
Sexual orientation
Religion

Cognitive

Information
Knowledge
Heuristics
Representations
Mental models
Personality

Value

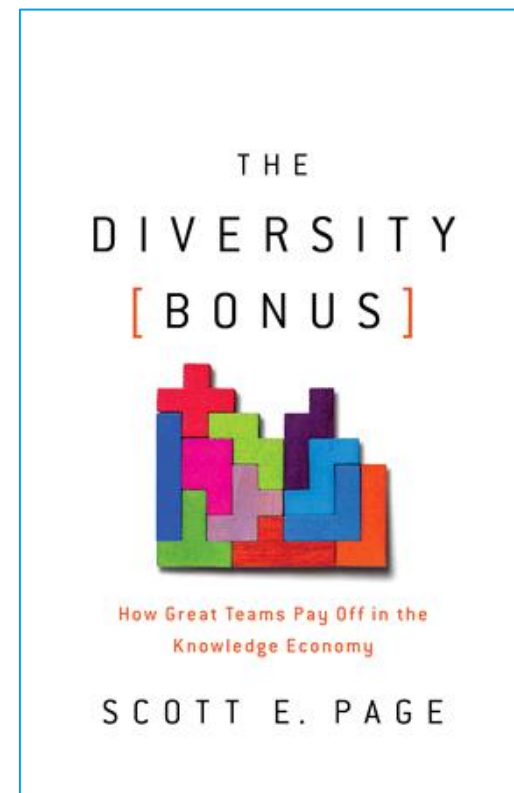
Task
Goal
Target
Mission

Source: Scott E. Page, *The Diversity Bonus: How Great Teams Pay Off in the Knowledge Economy* (Princeton, NJ: Princeton University Press, 2017). Also, Karen A. Jehn, Gregory B. Northcraft, and Margaret A. Neale, "Why Differences Make a Difference: A Field Study of Diversity, Conflict, and Performance in Workgroups," *Administrative Quarterly*, Vol. 44, No. 4, December 1999, 741-763.

Why Teams Can Be Smart

Diversity Prediction Theorem

Collective error = average individual error – prediction diversity



Source: Scott E. Page, *The Diversity Bonus: How Great Teams Pay Off in the Knowledge Economy* (Princeton, NJ: Princeton University Press, 2017).

Team Management

- **Psychological safety.** Team members feel safe to take risks and be vulnerable in front of one another.
- **Dependability.** Team members get things done on time and meet a high bar for excellence.
- **Structure and clarity.** Team members have clear roles, plans, and goals.
- **Meaning.** Work is personally important to team members.
- **Impact.** Team members think their work matters and creates change.

Source: Julia Rozovsky, "The Five Keys to a Successful Google Team," November 17, 2015. See <https://rework.withgoogle.com/blog/five-keys-to-a-successful-google-team/>; Laura Delizonna, "High-Performing Teams Need Psychological Safety. Here's How to Create It," *Harvard Business Review*, August 24, 2017.

Optimizing Decision-Making in Investment Teams

Michael J. Mauboussin

Head of Consilient Research

Counterpoint Global, Morgan Stanley Investment Management

March 2025

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