global equity ORGANIZATION

Behavioral Economics and Equity Compensation Part I

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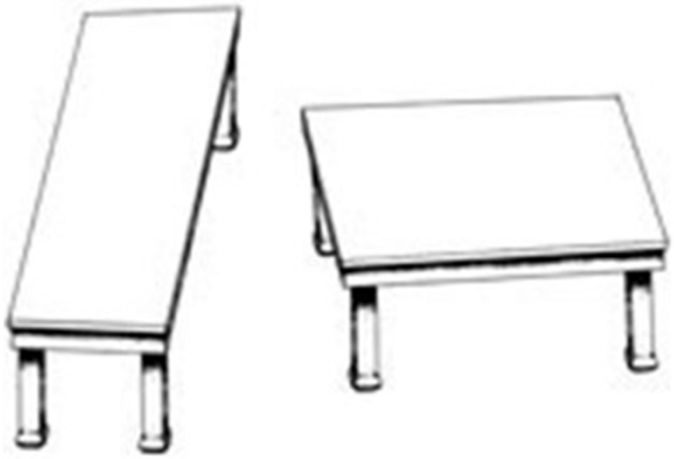

Thank you for joining today's webinar

We will begin in just a few minutes

If you haven't done so already, please dial-in to the teleconference portion of the meeting:

US and Canada dial in: 1 866 740-1260
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Access code: 7927913 (followed by the # key)

Background

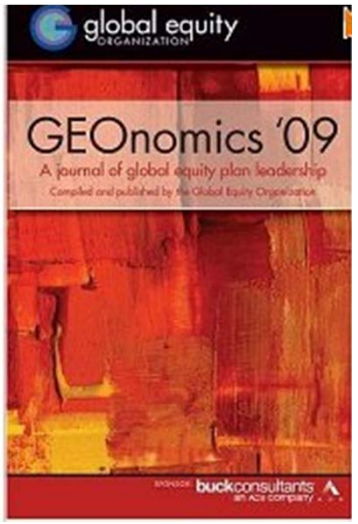
Industrial / Organizational Psychology ⟷ Business Administration / Economics

↓

MBA: Marketing and HR

↓

Economics, Psychology, Marketing, HR + Equity Compensation =



Some Questions

- Why are we discussing this?
- What goes wrong with equity compensation?
- What is behavioral economics?
- How does this apply to equity compensation?
- Nice theory – has anyone really done this?
- What behavioral challenges in equity compensation?
- Where we can go from here?

Why We're Discussing This

- External pressures on equity compensation
  - Dilution (overhang, run rate, value transfer) limitations from investors and advisers
  - Role of equity compensation in financial crises
  - Blurring of "excess executive pay" and "equity compensation"
  - Equity compensation issues influencing Say-on-Pay votes
  - Academic studies indicating "no impact on performance"
- The result
  - Smaller grants, lower participation
  - More complex grants
  - Continued questioning of effectiveness of equity

Why We're Discussing This

- Internal pressures on equity compensation
  - Cost of plans – accounting expense and plan operation
  - Inability to provide data on plan effectiveness and return on investment
  - Complexity of plan design and disclosure requirements
  - Data indicating that employees don't understand programs
  - Data indicating that employees don't realize full value from grants
- The result
  - Eroding credibility of equity compensation
  - Cost-driven design and participation decisions
  - Increased consideration of non-equity alternatives

What Goes Wrong with Equity Compensation

- Employee behaviors that highlight the issue
  - Suboptimal option exercise behavior
  - Full liquidation at vesting/exercise
  - Low stock purchase program (ESPP) participation
  - Lower than expected participation in option exchange
  - Inattention to vested awards
  - In-the-money options expiring unexercised
  - Decisions - or no decisions - under “choice” programs
- The result
  - Lower compensation delivered than planned or intended
  - Lower return on investment for employer

What Goes Wrong with Equity Compensation

But Employer Behaviors Contribute to the Problem

- Highly complex programs driven by
  - Compliance
  - Governance themes
  - "Market data"

Target # PS	# RS	# Options	Grant Date Fair Value	Fair Value % of Face	Details	Measures	% of Total LTI
56,667			$938,972	95%	3rd tranche of 2007-2009	50% sales, 50% EPS	9%
56,667			$888,539	90%	2nd tranche of 2008-2010	50% sales, 50% EPS	8%
56,667			$888,539	90%	2nd tranche of 2008-2010	50% pre-tax operating margin, 50% working capital plus capital expenditures as a % of net sales	8%
85,303			$1,265,897	85%	1st tranche of 209-2011	50% EPS, 25% sales, and 25% working capital plus capital expenditures as a percent of net sales.	12%
	95,945		$1,679,997	100%	Time-based vesting (RSU)	1/3 at end of years 3,4,5	15%
		1,140,188	$5,209,633	26%	Performance-vested options	15% price appreciation threshold	48%
			$10,871,577				

37%

- Frequent changes in program design
  - Compensation Committee member turnover
  - Chasing market trends and "best practice"
  - Copying ineffective design of peers – time lag effect

What Goes Wrong with Equity Compensation

But Employer Behaviors Contribute to the Problem (continued)

- Communication of program
  - Assumption that more communication is better
  - Over-engineering of communication
  - No link between communication effort and behavior
- Employee survey focus on “beliefs” and “feelings”
  - No attention to what employees actual “know”
  - Optimistic interpretations (half of employees understand!)
- No emphasis on plan design and “choice architecture”

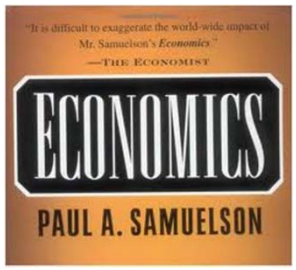
Why We're Discussing This

- Current equity program design and operation is based on several assumptions about employees and equity rooted in *classical economics*
- Globally, companies and nations are turning to an alternative view of human economic behavior that may better explain current dynamics
- Perceived "problems" in other citizen and employee financial behaviors have been explained and improved with this new set of tools
- These alternatives views and tools comprise the field of *behavioral economics*

Behavioral Economics

Classical Economics

- Studies the allocation of scarce resources to achieve desired goals
- Is based on the assumption that people make decisions adhering to three principles:
  - Rationality
  - Maximization
  - Information



- Malthus, Mill, Keynes, Friedman, Samuelson, Greenspan
  - "Yes, I've found a flaw. I don't know how significant or permanent it is. But I've been very distressed by this fact."

  - *Alan Greenspan, 23-Oct-2008 Testimony to US Congress*

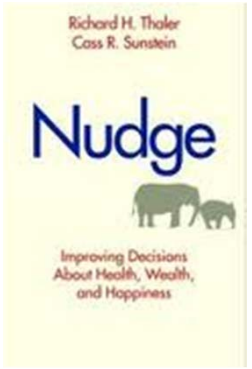
Behavioral Economics

- Roots go further back than classical economics
  - Hume's *A Treatise of Human Nature* (1739)
  - *"There is no quality in human nature, which causes more fatal errors in our conduct, than that which leads us to prefer whatever is present to the distant and remote"*
  - Becomes "Hyperbolic Discounting"

- Multiple references in Adam Smith's *The Theory of Moral Sentiment* (1759)
  - *"We suffer more ... when we fall from a better to a worse situation, than we ever enjoy when we rise from a worse to a better"*
  - Becomes "Loss Aversion"

Behavioral Economics

- Relatively new attention to the field
- 2002 Nobel Prize* to Kahneman established some credibility among traditional economists
  - "for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty"
- Gained popular attention with publishing of *Nudge* (Thaler and Sunstein) in 2008
  - "how we can apply the new science of choice architecture to nudge people toward decisions that will improve their lives by making them healthier, wealthier, and more free"

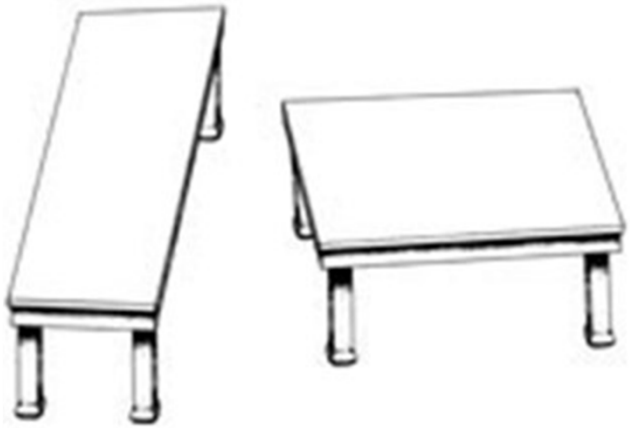


*There is no Nobel Prize for Economics; the award is actually titled

The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel

Behavioral Economics

- Combines cognitive psychology, social psychology, and economics
- Attempts to explain why and how people make seemingly irrational decisions
- Finds that people are not rational, do not try to maximize, and do not use all available information
- “People systematically go wrong”



Shepard’s Tables
Mind Sights, 1990

What Happens When We Grant Equity to Employees?

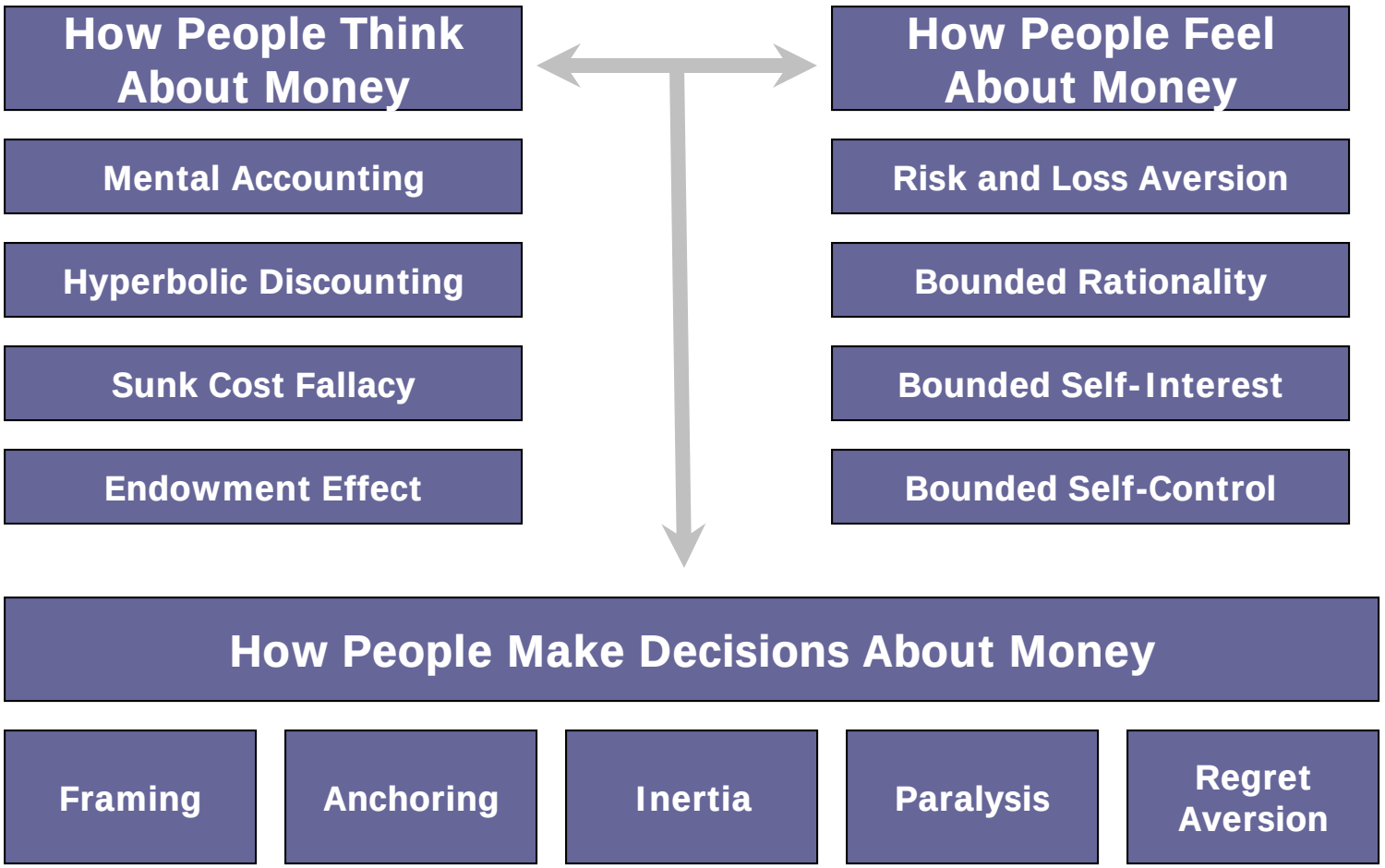
Classical Economics says:

"Thank you for this restricted stock unit award. I am going to go read the plan document and award agreement, analyze how this affects my total compensation and total financial position under various stock price scenarios, and put together a plan for what I will do on each vesting date."

Behavioral Economics says:

I don't know what a stock unit is. Actually, I don't even know what stock is. Why is this "restricted?" This is way too much read. Is this a trick? Why didn't you just increase my salary? I don't want this. Take it back. I can't afford to buy this.

Tenets of Behavioral Economics



Examples of Research Supporting the Theory

- Endowment Effect (Kahneman): The classic coffee mug experiment
  - How much would you pay for that mug?
  - Here's a mug, free – for what price would you sell it?
  - Selling price was more than 2x the buying price
    - This finding has been repeatedly replicated!

- Loss Aversion (Hossain and List): Communicate bonus opportunity as
  - "Receive a bonus if target is met" or
  - "Lose a provisionally granted bonus if target is not met"
  - Performance was much higher under the second condition

Other Research: Non-Economic…or is it?

- Broken windows theory (Kelling and Wilson)
  - Tendency for people to behave in a certain way can be strengthened or weakened by what they observe others to be doing
  - Graffiti, littering, short-cutting through restricted area
- Farmers and fertilizer (Duffo, Kremer, and Robinson)
  - Small discount more effective in generating purchasing behavior immediately after harvest
  - A 50% discount later in the season increased purchases by only as much as a earlier small discount

Applications to Equity Compensation

How People Think About Money

Concept	Meaning	Equity Compensation Example
Mental accounting	Tendency to value some dollars differently from others based on source	"This is not part of my compensation"
Hyperbolic discounting	Tendency to put more value on more immediate payoffs but asymmetrical effects when timeframe is extended	"That's too long – I'll take it now" but "That's even longer, I'll wait"
Sunk cost fallacy	Decisions about future financial outcomes based on irrecoverable previous costs	"I'm already vested in these underwater options"
Endowment effect	People value what they own more than what they do not own	"Why should contribute to ESPP – I give up cash now for a risky stock"

Applications to Equity Compensation

How People Feel About Money

Concept	Meaning	Equity Compensation Example
Risk Aversion	Preference for a more certain though likely lower payoff	Preference for RSUs over stock options
Loss Aversion	People prefer avoiding losses to acquiring gains; people overweight losses	Early exercise of stock options ("suboptimal exercise"); sell-all exercise
Bounded Rationality	Some decisions are just too complex for perfect rationality	Option exchange program nonparticipation
Bounded Self-Interest	People will not always maximize; may help others after a certain gain	Institutional shareholders/ advisers vs. employee ownership advocates
Bounded Self-Control	Procrastination	Failure to make decision re: ESPP enrollment

Applications to Equity Compensation

How People Make Decisions About Money

Concept	Meaning	Equity Compensation Example
Framing	People draw conclusions based on how information is presented	"Forfeit shares" or "thanks to vesting!"
Anchoring	First impressions are lasting	"That's fewer shares than I got last year"
Status quo bias (inertia)	People prefer things as they are; take no action	"The stock will come back, I'll just hold on to these underwater options"
Decision paralysis	Tendency to "do nothing" when the decision is complex	"What if I make the wrong decision?"
Regret aversion	No decision is better than a bad decision	"What if I make the wrong choice?"

Nice Theory…Does It Work?

- US: Pension Protection Act of 2006
  - Auto-enrollment (“opt-out”) approach for 401(k) plans already available since 1998
  - Can be coupled with auto-escalation beginning 2008
  - Incentive for employers: avoid nondiscrimination testing
- What happened:
  - Participation went up with auto-enrollment
  - Average contribution (% of pay) went down in some cases
- **Lessons learned: Inertia works**
  - **Participation up**
  - **No change in default contribution rate (oops)**
  - **Opt-out approach for escalation increases contribution**

Nice Theory…Does It Work?

- Other examples
  - US: Default asset allocation in 401(k) plans
  - US: Medical plan annual enrollment defaults to what chose last year
  - US: "Lifestyle funds" in 401(k) and IRAs
  - Bi-weekly vs. semi-monthly payroll
  - SE: Premium Pension Authority – investment choice
  - NZ: KiwiSaver

Behavioral Challenges in Equity Compensation: Roots

Employee Behaviors

- Suboptimal exercise behavior
  - Endowment effect
  - Risk aversion
  - Loss aversion
- Full liquidation at vesting/exercise
  - Framing
  - Endowment effect
  - Risk aversion
  - Loss aversion
  - Hyperbolic discounting

Behavioral Challenges in Equity Compensation: Roots

Employee Behaviors

- Low stock purchase program (ESPP) participation
  - Framing
  - Decision paralysis and regret aversion
  - Bounded self-control
  - Hyperbolic discounting
- Lower than expected participation in option exchange programs
  - Framing
  - Inertia
  - Bounded rationality
  - Sunk cost fallacy

Behavioral Challenges in Equity Compensation: Roots

Employee Behaviors

- Inattention to vested in-the-money options
  - Mental accounting
  - Bounded rationality
  - Bounded self-control
- Decisions under “choice” programs
  - Inertia
  - Bounded rationality
  - Regret aversion
  - Loss aversion

Situations That Lead to Poor Choices

When is it most difficult to make good choices?

- Benefits and costs of decision are separated in time
- Decision is difficult or complex
- Decision is made infrequently
- Individual has lack of experience with that decision
- Does not get good or timely feedback on outcome of decision
- Does not understand ultimate effect of decision

Identify situations that lead to poor choices

How might plan design and operation have room for improvement based on these concepts?

- New hire grant and annual grant
- Vesting schedules
- Combination of stock options and RSUs (and PRSUs)
- Opportunity for ESPP participation
- Company stock as a 401(k) investment alternative
- Cashless exercise option
- Option exchange program
- Choice program (options or RSUs)
- Dollar-denominated equity awards (and fair value)

Questions?

Where We Can Go From Here

Next Month's Webinar…

- Plan design concepts
- Plan operation ideas
- Selling economics to Accounting, Finance, Legal, HR
- Initial results of data mining project testing some theories

Behavioral Economics and Equity Compensation, Part II
Wednesday, 26-October-2011
9am PT

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