What Investors Really Want
Lessons from Behavioral Finance

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What Investors Really Want
Utilitarian, Expressive, and Emotional Benefits

The difference between:

1. Giving a rose to a woman you court
2. Giving her $10, the price of a rose
What watch-buyers really want
Why do I pay $10,000 for an IWC watch?

Utilitarian benefits
What does it do for me and my pocketbook?

*It tells time and never breaks down*

Expressive benefits
What does it say about me (to me and to others)?

*I am a successful man with high status and refined tastes*

Emotional benefits
How does it make me feel?

*Accomplished and masculine*
What Investors Really Want
We want to stay true to our values

Socially responsible investments

Utilitarian benefits
I’ll get high returns

Expressive benefits
I am socially responsible

Emotional benefits
I have peace of mind because my finances are true to my values

Truth be told, I’m as financially ambitious as I am socially conscious.
What Investors Really Want
We want high status and proper respect

Hedge funds

Hedge-fund money can put you into exhilarating conversations about the virtues of Gulfstreams versus Falcons

Utilitarian benefits

*I will have high returns with low risk*

Expressive benefits

*I have high status*

Emotional benefit

*I feel proud as a member of an exclusive club*
What Investors Really Want
We want great beauty and high status

Kenneth Griffin of Citadel bought Jasper Jones’ “False Start” for $80 million

Meir Statman painted “Colors in Straight Lines” $50 canvass and $20 paint
What Investors Really Want
We want to play and win

Benefits to ‘active’ investors

Utilitarian benefits
*It provides high returns*

Expressive benefits
*I am much smarter than mediocre index fund investors*

Emotional benefits
*I love the exhilaration of winning*
What Investors Really Want

What do we want?

Why do we invest in socially responsible funds?

Why do we invest in hedge funds?

Why do we listen to TV gurus?
What Investors Really Want

Wants and cognitive errors

What do we want?

To get high returns (What is the money for?)

To nurture our families

To banish fear of poverty

To savor hope for riches

To play the beat-the-market game and win
First Lesson
Know Yourself
Know Your Clients
Know Your Competitors
Know their wants
Know their goals
Know their cognitive errors
Know their emotions
Second Lesson
Know Science

Teach science to your clients
Teach the science of financial markets
Teach the science of human behavior
Apply science to public policy

Knowledge through science distinguish professional investors from individual investors
Second Lesson
Know Science and teach science
The tools of science

“System 1” is the *Intuitive (Blink)* system

System 1 is automatic, effortless, rapid, and skilled
(An American in the US, driving on the right)

“System 2” is the *Scientific (Think)* system

System 2 is controlled, effortful, slow, and rule-following
(An American in the UK, driving on the left)
Know the science of human behavior and teach it

Why is it hard to resist intuition, even when it is wrong?

John Nash - A Beautiful Mind
Why do we behave as we do?

Behavioral Finance version 1

Because we are *irrational*

Behavioral Finance version 2

Because we are *normal,* pursuing what normal investors want

We fall victim to cognitive errors and misleading emotions *on our way to what we want*
Foundation blocks of standard finance

1. Investors are rational

2. Investors should construct portfolios by the rules of mean-variance portfolio theory (and actually do so)
   Investors save and spend by life-cycle theory (Smoothing spending over the life-cycle)

3. Markets are efficient

4. Expected returns are determined only by risk (measured by beta)
   (Only utilitarian factors)
Foundation blocks of behavioral finance

1. Investors are normal

2. Investors construct portfolios by the rules of behavioral portfolio theory (and are wise to do so)
   Investors save and spend by behavioral life-cycle theory (Affected by framing, mental accounting and imperfect self-control)

3. Markets are not efficient (but are not as easy to beat as many normal investors think)

4. Expected returns are determined by more than risk (Utilitarian, expressive and emotional factors)
Investors are normal

Fear is a normal emotion - Usually a useful emotion

Until politicians actually do something about the world economy...

BE AFRAID

The Economist
The Shining
Fear and exuberance are normal emotions
Fear and exuberance can be misleading emotions
Do you think that now is a good time to invest in the financial markets?
Percentage of investors who said Yes

Source: UBS Index of Investor Optimism
Fear and exuberance are normal emotions
Fear and exuberance can be misleading emotions

Correlation = -0.31

January 2000
(Internet Bubble)

February 2009
(Global Financial Crisis)

Expectations of Returns
AAII Investor Sentiment

Expectations of Risk
(VIX - The Fear Index)
Market efficiency

Two main definitions of efficient markets:

*Rational* markets - where securities' prices always equal their intrinsic values

*Unbeatable* markets - where investors are unable to generate consistent excess returns (alpha)

Bubbles *cannot* exist in *rational* markets

Bubbles *can* exist in *unbeatable* markets
Eugene Fama said:

“I don’t even know what a bubble means

These words have become popular

I don’t think they have any meaning”
Robert Shiller said

The assertion stock prices were rational was

“one of the most remarkable errors in the history of economic thought”

Instead, “Mass psychology may well be the dominant cause of movements in the price of the aggregate stock market”
Eugene Fama said:

Asked in 2010 about those who warned that housing prices would crash, he responded,

“Right. For example, Shiller was saying that since 1996”
What is “Mass Psychology”? 

Sentiment (bullish or bearish herds) 
Misleading emotions (excessive fear or exuberance) 
Cognitive errors (extrapolating past returns) 
Wants (Want of riches in 1999 and want of security in 2008)
Rational and beatable

So markets are not rational
But are they beatable?

*Beatable* markets - where investors are able to generate consistent excess returns (alpha)
Efficient Markets

Are markets beatable?

Are markets beatable by Warren Buffett and Tom Perkins (a venture capitalist) ?
Are market beatable by professional investors?
Are markets beatable by individual investors?
Why do individual investors think that it is easy to beat the market?
Efficient markets
Are markets beatable?
By whom?

Tom Perkins – Professional Investor - Venture Capitalist

Individual investor says to Tom Perkins:

“Tom, how can you live with [this risk]?"

“Well, Henry, it’s your money!”
Framing errors

I sell my stocks because stocks are sure to go down!

Who is the idiot who is buying my stocks?

Framing the trading game as tennis against Roger Federer
(or Goldman Sachs, or high frequency traders, or Raj Rajaratnam)
Overconfidence errors
On average, we are above average

![Graph showing overconfidence errors]

Source: UBS Index of Investor Optimism
Robert Shiller – Irrational Exuberance
Beating the market with P/E ratios
Beating the market with P/E ratios

\[ y = 16.04 - 0.40x \]

Adjusted \( R^2 = 0.00 \)

Standard Error = 12.70%


Beating the market with P/E ratios

1. Accumulation at the end of 2002 from $1 invested at the beginning of 1871.

Fisher & Statman (2006)
Hindsight errors
What the Pros were forecasting in BusinessWeek on December 20, 2007 about the S&P 500 on December 31, 2008

Actual S&P 500 return -38%

Forecast

Elaine Garzarelli 22% (100% in stocks)
Laszlo Birinyi 16% (AIG)
Tobias Levkovich – Citigroup 15% (Likes financials)
Ben Inker – GMO -1% (3% in stocks)
Robert Arnott – Research Affiliates -8% (Likes TIPS)

Efficient markets and free markets

Suppose that the market for the stock of an electric company is efficient (rational)

Price per share = Value per share = $100

Now the government imposes a limit on pollution

Price per share = Value per share = $80

The market remains efficient but it is no longer as free
Market efficiency and asset pricing models

The market efficiency hypothesis is a joint hypothesis of market efficiency and an asset pricing model.

If the CAPM is the right asset pricing model then the market is not efficient.

Anomalies:
- The returns of small cap stocks exceed CAPM expected returns.
- The returns of value stocks exceed CAPM expected returns.

Should we give up market efficiency or the CAPM as the asset pricing model?
Why does the BMW 330i cost more than the Acura TL?

Is the market for automobiles inefficient?

Is the automobile pricing model mis-specified?
Behavioral Finance

Stocks are like automobiles

The automobile pricing model has:

Utilitarian factors:
- Gas mileage
- Safety
- Physical comfort

Expressive factors:
- Beauty
- Status

Emotional factors:
- Exhilaration
- Emotional comfort
Fama and French (1992) gave up the CAPM rather than market efficiency. They introduced the 3-factor model:

1. Market (beta)
2. Size
3. Book-to-market

Measure Risk
Standard Finance

Market efficiency and asset pricing models

The number of factors keeps growing

1. Market
2. Size
3. Book-to-market
4. Momentum
5. Liquidity
6. Skewness of returns

Measure Risk
Behavioral Finance

Market efficiency and asset pricing models
Utilitarian, expressive and emotional factors
Statman, Fisher, and Anginer (FAJ 2008)
“Affect in a Behavioral Asset Pricing Model”

1. Market
2. Size
3. Book-to-market
4. Momentum
5. Liquidity
6. Social responsibility
7. Status

Measures utilitarian risk?
Measures expressive and emotional affect?
Question

If you could increase your chances of having a more comfortable retirement by taking more risk, would you:

a. Be willing to take a *little* more risk with *all* your money?

b. Be willing to take a *lot* more risk with *some* of your money?
If you could increase your chances of improving your returns by taking more risk, would you:

a. A little more risk × All of your money = Addition to portfolio risk

b. A lot more risk × Some of your money = Addition to portfolio risk
What do investors want?
Freedom from fear – Downside protection
Hope – Upside potential
Goal-based portfolios

We want to be rich
(10% chance to be rich)

We don’t want to be poor
(Almost 100% chance not to be poor)
Combining elements of mean-variance portfolio theory and behavioral portfolio theory into a mental-accounting portfolio framework

Portfolio Optimization With Mental Accounts, *Journal of Financial and Quantitative Analysis*, 2010

Portfolios for investors who want to reach their goals while staying on the mean-variance efficient frontier

*Journal of Wealth management*, 2011

Das, Markowitz, Scheid, and Statman
The overall portfolio and mental account (goals) sub-portfolios are all on the mean variance efficient frontier.
Question

Think about switching your portfolio

You have a 50-50 chance to increase your standard of living by 50% throughout your life

You have a 50-50 chance to decrease your standard of living by X% throughout your life

What is the maximum X% you are willing to accept?

1. 10% or less
2. 11-20%
3. 21-30%
4. More than 30%
Question

Who (on average) are more loss averse?

1. Dutch

2. Vietnamese
Countries where loss aversion is high tend to be countries where uncertainty avoidance is high.

**Uncertainty Avoidance Index (UAI)**

- China: 40
- France: 86
- Italy: 75
- Japan: 92
- Poland: 93
- US: 46
Question

Do you think that:

1. Incomes should be made more equal

or

2. We need larger income differences as incentives
Countries where uncertainty avoidance is high tend to be countries where preference for equal income is high.

**Preference for Equal Income**

- China: 4.94
- France: 5.92
- Italy: 5.06
- Japan: 5.24
- Poland: 4.41
- US: 4.94
Countries where uncertainty avoidance is high tend to be countries where social spending is high.

Social Spending

<table>
<thead>
<tr>
<th>Country</th>
<th>Social Spending</th>
</tr>
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<tbody>
<tr>
<td>NA</td>
<td>29.7</td>
</tr>
<tr>
<td>China</td>
<td>24.7</td>
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<tr>
<td>France</td>
<td>18.7</td>
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<tr>
<td>Italy</td>
<td>19.7</td>
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<tr>
<td>Japan</td>
<td>16.3</td>
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<tr>
<td>Poland</td>
<td></td>
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<tr>
<td>US</td>
<td></td>
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</tbody>
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What Investors Really Want
Why do we put money in our portfolios?
What will we do with it?

Utilitarian benefits
I have money for retirement

Expressive benefits
I am financially independent

Emotional benefits
I have freedom from fear
(Downside protection)
I have hope for riches
(Upside potential)
What Investors Really Want
We want a dignified retirement life

Problem:
Many do not save enough for retirement

Reasons:
- Inability to earn enough for spending and savings
- Inability to properly allocate earnings to spending and savings
What Investors Really Want
We Want to Save for Tomorrow and Spend it Today
The Problem of Self-Control

Save for Tomorrow          Spend it Today
What Investors Really Want
We Want to Save for Tomorrow
and Spend it Today

The benefits and difficulties of self-control

Genetics account for one-third of differences in saving behavior

Self-control is associated with conscientiousness (One of the Big-Five factors of personality)
Conscientious people tend to excel academically and at jobs, have stable marriages, and live long

Conscientious people do not buy things on impulse
What Investors really Want

We want retirement savings protected from weak self-control

Retirement savings in the old mandatory DB paternalistic days

- **Voluntary Savings (Libertarian)**
- **Mandatory Defined Benefits (DB) Retirement Savings (Paternalistic)**
- **Social Security (Paternalistic)**
What Investors really Want
We want retirement savings protected from weak self-control
Retirement savings in the early voluntary libertarian DC days

Voluntary Savings (Libertarian)

Voluntary Defined Contribution (DC) Retirement Savings (Libertarian)

Social Security (Paternalistic)
What Investors really Want
We want retirement savings protected from weak self-control
Retirement savings in the more recent voluntary libertarian-paternalistic (Nudge) DC days
What Investors really Want
We want retirement savings protected from weak self-control
Retirement savings in my proposed mandatory paternalistic (Shove) DC days

Voluntary Savings (Libertarian)
Mandatory Defined Contribution (DC) Retirement Savings – With a Shove (Paternalistic)
Social Security (Paternalistic)
What Investors really Want

We want retirement savings protected from weak self-control

Retirement savings in my proposed mandatory paternalistic (Shove) DC plan

1. Combined mandatory contributions by employers and employees amounting to a minimum of 12% of earnings

2. Administration by companies offering DC plans but with a central agency for employees whose companies do not provide DC plans

3. Default offerings of well-diversified target-date funds set in one-year intervals
What Investors really Want
We want retirement savings protected from weak self-control
Retirement savings in my proposed mandatory paternalistic (Shove) DC plan

4. Fees not exceeding 30 bps

5. No borrowing from retirement savings accounts and no cashing out of accounts before retirement age

6. Enhanced financial literacy through education at high schools and elsewhere
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References


• S. Das, H. Markowitz, J. Scheid, and M. Statman, “Portfolios for investors who want to reach their goals while staying on the mean-variance efficient frontier,” *Journal of Wealth management*, 2011


• M. Statman, “Culture in loss-aversion, income inequality, and safety nets

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