

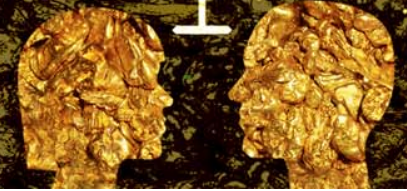
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# **An Actuarial Journey into Financial Planning**

**Mark Berry**

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*“Today, what then seemed most certain has in many ways proved to be most uncertain, and in science the rigid and somewhat arid era of physical determinism has given way to a more flexible philosophy with probability and statistics as the prominent factors.” (Redington 1952)*

Further to Redington’s comments, actuaries have a role in unravelling this uncertainty and making financial sense of the future beyond that which has been traditionally perceived. Taking our skills beyond the traditional areas we can seek to further solidify the profession and help investors on an individual level achieve their goals, and facilitate the unravelling of their uncertainties.

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## OVERVIEW

### 1. BACKGROUND

### 2. ASSESSING FINANCIAL NEEDS

- Net Worth Consumption Rate

### 3. PORTFOLIO CONSTRUCTION PRINCIPLES

- Critique collective investment vehicles

### 4. INVESTMENT PORTFOLIO CONSTRUCTION

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## Deregulation, transparency, accountability

- Tide turned in the 1980s with the Campbell Report
- Introduction of the regulators
- Increased information flow
  - Is this being utilised?
  - Is information overload leading to volatility?
- Misleading information



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## End of the “estate”

- Surplus, reserves, smoothing
- Flows of money where ownership is not clearly defined are fading in a consumer centric world
- This does not mean that actuarial skills are irrelevant

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## Cultural change

- Moving to processes that satisfy customer needs
- Remuneration skew
- Opportunity to champion for the individual
  - Consumer centric processes
  - Empowerment of individuals
- Advice delivered with Integrity

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## Actuaries & Financial Planning

- Actuaries understand needs and investments
- Risk management = structuring affairs so as there is less risk that a clients financial future is compromised
- Actuarial training:
  - Pegler, Bailey, Redington



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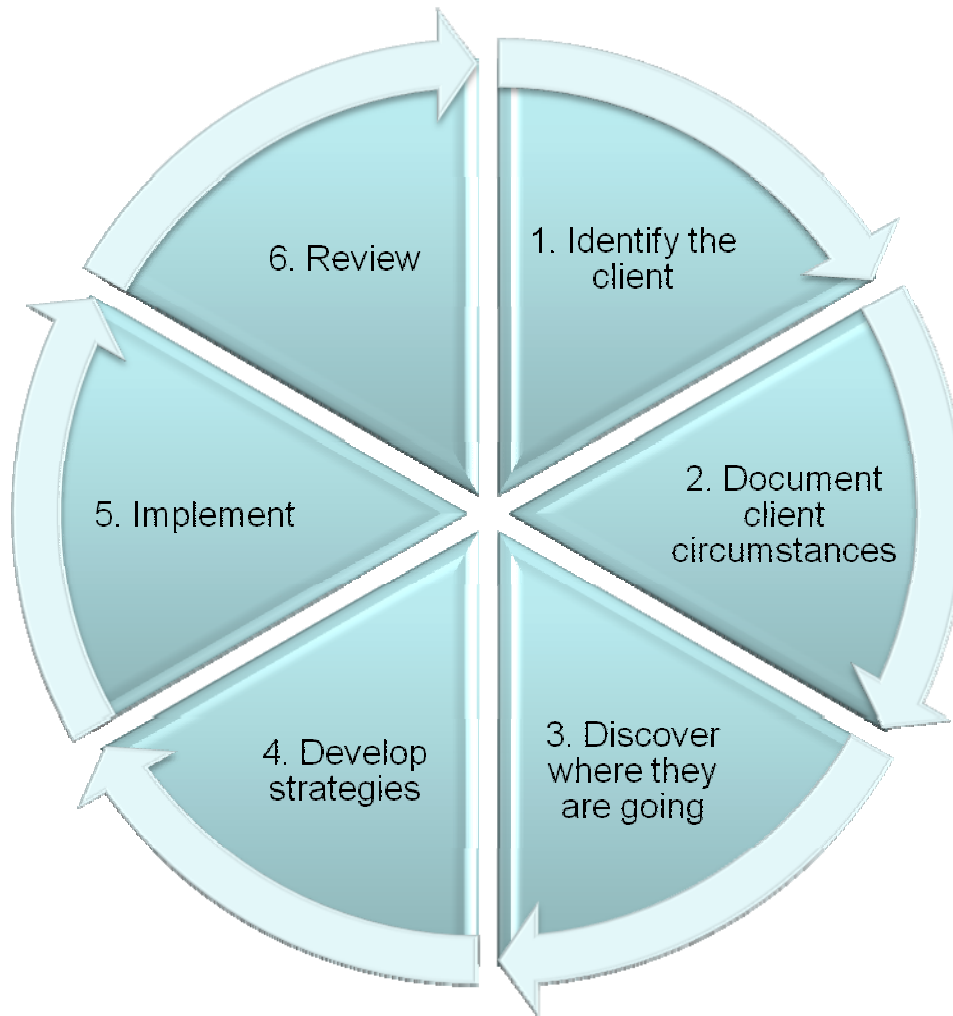
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## Financial Planning Process



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## Financial Planning Process

- Life can be a random experience
  - Financial Planning introduces discipline.
  - Strategies to achieve goals are established.
- “Total savings capacity” represents the total of
  - non-super income after tax and spending, PLUS
  - Super contributions after tax. PLUS
  - Super Fund Investment income after tax LESS
  - Pensions paid out

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# Financial Planning Process

## How to get there

- Cashflow
- Expenditure
- Personal circumstances
- Tax
- Structures
- Investment strategies
- Insurance

Don't judge but map the resources to the requirements

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## Net Worth Consumption Rate

Net Worth Consumption Rate (NWCR) is defined as:

$$[\text{Annual Expenditure}] / [\text{Investment Net Worth}]$$

**Annual Expenditure:** Annual cost of funding regular lifestyle needs including deemed rent on primary residence.

**Investment Net Worth:** The market value of all assets that can be called upon to fund this annual spend.



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## Lifestyle Sustainability

Lifestyle Sustainability Measure (LSM) is defined as:

**After Tax Investment Return**

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**Net Worth Consumption Rate**

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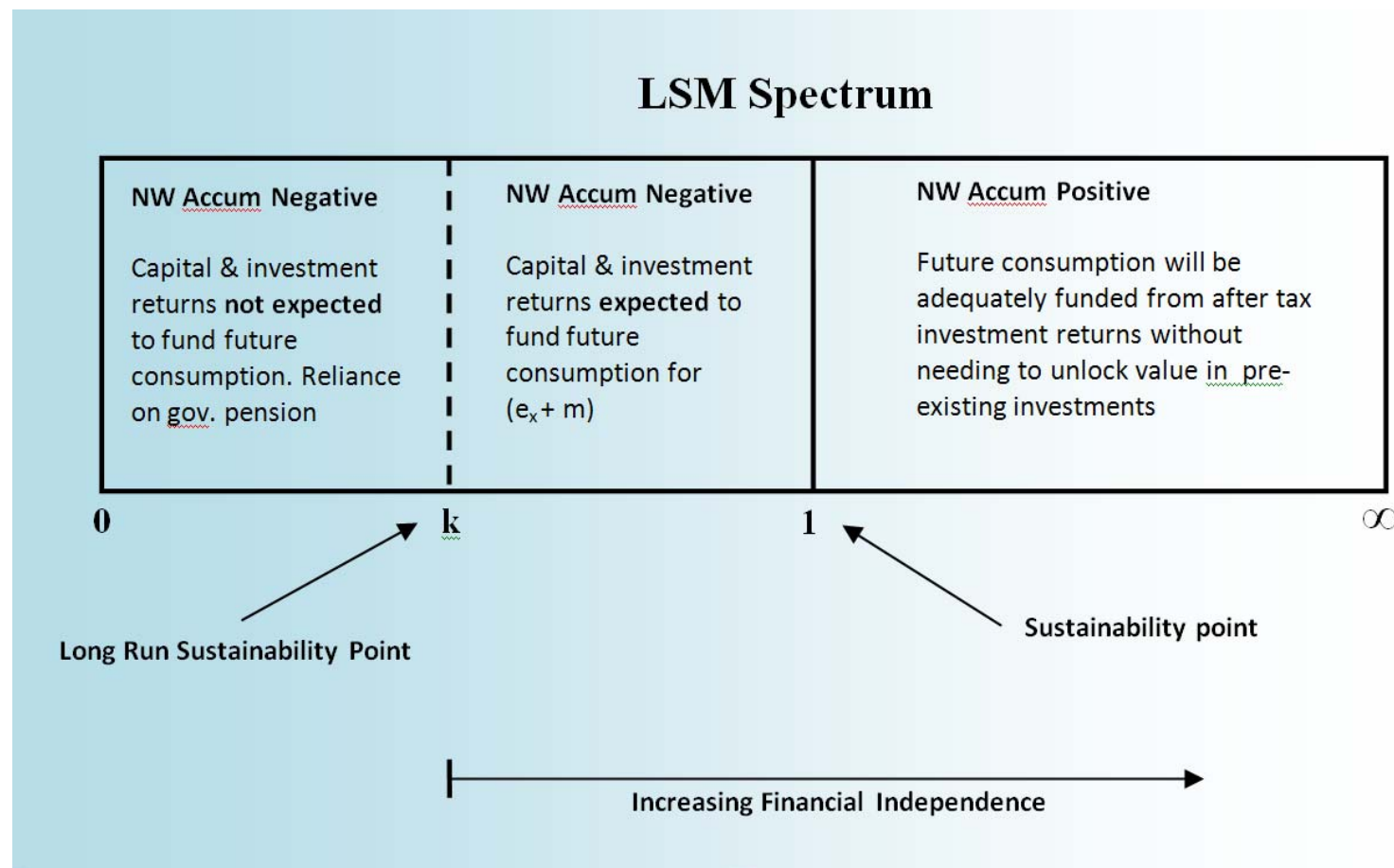
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# Lifestyle Sustainability



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## NWCR & LSM Example

### A couple approaching retirement:

- Have \$1 million in superannuation,
- Own a \$1 million home which would be expected to rent for \$800 per week,
- Have negligible other assets, and
- Require \$8,000 per month to fund their lifestyle.
- If they were to downsize it would be to a \$500,000 home that they could rent for \$450 per week (Scenario 2)
- By downsizing their property and living closer to where they frequent they can use public transport allowing them to sell one car, reducing their monthly spend to \$7,000 (Scenario 3).
- The After Tax Investment Return is assumed to be 5% for the purpose of calculating the LSM.

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## NWCR & LSM Example (continued)

Scenario Details	Net worth	Spend	NWCR	LSM
With home (Base Rate)	\$2,000,000	\$137,600	6.88%	0.76
Scenario 1 (Home left for inheritance)	\$1,000,000	\$137,600	13.76%	0.36
Scenario 2 (Downsize home)	\$2,000,000	\$119,400	5.97%	0.84
Scenario 3 (Downsize home + no cars)	\$2,000,000	\$107,400	5.37%	0.93



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## NWCR & LSM Example (continued)

- Reducing either:
  - The current annual spend or
  - The quality of primary residence.
- Increases the Lifestyle Sustainability Measure
- Alternatively working longer to accumulate more net worth also improves the Lifestyle Sustainability Measure

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## NWCR & LSM – Additional Points

- Further results
  - The compounding effect
  - Investment environment effect
  - Taxation effect
  - Additional income effect
- Opportunities for further conceptual development
  - Future earning potential
  - Time horizon
  - Expected annual expenditure as a function of age
  - Determining  $k$ , the long term sustainability point

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## Investment needs

- Conflicting ideologies
  - Risk tolerance test by client
  - Needs of the clients and risks they can afford to take
- It is a journey full of adjustments



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## Collective investment vehicles

- They have a purpose in specific situations
- Concerns

### 1. Lack of transparency

- I. Investment cashflow
- II. Quantifying fees
- III. Justifying fees
- IV. Underlying investments and risks



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## Collective investment vehicles (concerns cont.)

2. Cost vs Benefit

3. Reliance of index benchmark

4. Commune effect

- I. Redemption/mandate lost
- II. Manager must sell
- III. Creates problems in distressed environments

5. Lack of diversification

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## Collective investment vehicles (concerns cont.)

6. Inability to take advantage of corporate actions
7. Typically not assessed on an after tax basis
8. Lack of control
9. Less consumer centric
10. Suitability of valuation

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## PORTFOLIO CONSTRUCTION PROCESS

- Establish investment objectives
- Planner's scope of competency
- Investment groupings/classes
- Develop risk spectrum &  
Class Weightings
- Establish diversification rules
- Begin implementation



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## Establishing investment objectives

- There are no infallible laws of nature for investing
- Document objectives for example:
  - 3 years living expenses to be safely invested in cash and/or term deposits
  - Stable income at least equal to ‘regular’ living costs
  - Downside highly unlikely to exceed 25% within a one year time horizon
- Accountability or learning processes
- Identify planners scope of competency



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## Investment groupings/classes

100% 'cash' at call  100% growth

**Historical Classes**



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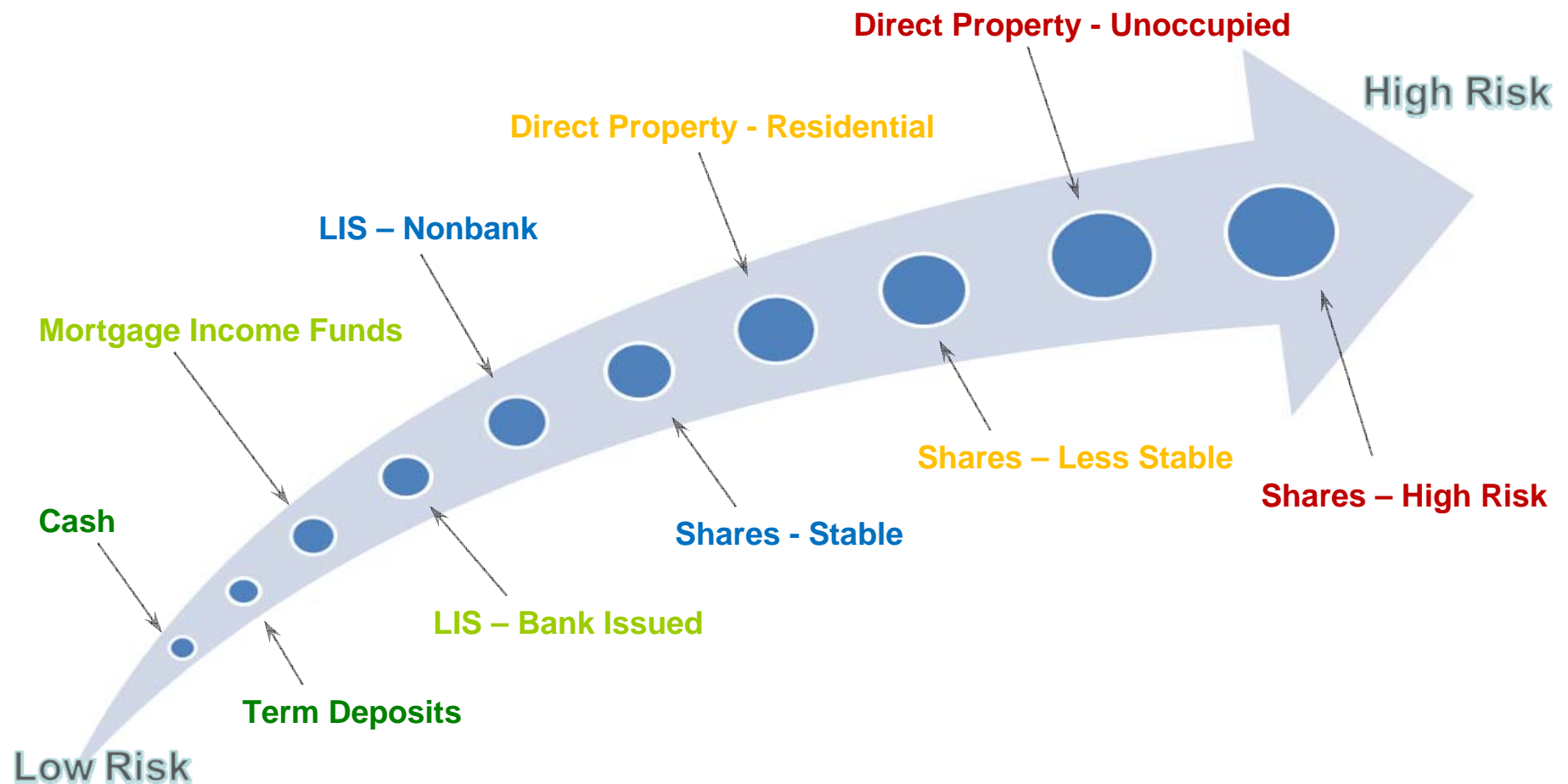
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## Develop risk spectrum & Class Weightings



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## Establish diversification rules

- No matter how good it looks it can still go wrong.
- Total exposure to correlated risks
- Term Deposits + institutional risk
- Guidelines for equities
  - Stable shares: 2-5%
  - Less Stable: 1-3%
  - High Risk: 0.5 – 2%





## Cash

- What is cash?
- Cash construction
  - Transactional account
  - Savings Account
  - Term Deposits
- One must not compromise safety by chasing an additional few basis points





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## Listed Income Securities

- Appropriateness (liquidity/exposure)
- Key features of income
- Maturity Scenarios
- An example at maturity – ANZPA
- Other issues and risks

CODE	Face Value	Price 27/03/08	Price 26/03/09	% Change	Running Yield (31-03-09)
CBAPB	\$200	\$194.00	\$167.00	-13.9%	4.94%*
NABHA	\$100	\$93.75	\$63.40	-32.4%	6.84%
SUNHB	\$100	\$86.00	\$44.50	-48.3%	7.88%
WCTPA	\$100	\$93.99	\$71.20	-24.2%	5.50%*
WOWHB	\$100	\$99.99	\$86.30	-13.7%	5.86%

\* Franking 100%

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## Listed Property

- Lost 70% of value in 2008
- Financial engineering and debt level
- Development risks
- Sustainability of rents
- Deflation
- Transactions forced in an illiquid asset at a low point
- Manager loosing control

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## Equities

- Reason for investing in equities
  - Belief that economy operates in such a way that the pool of investments to which it commits delivers
- The purpose of a model portfolio
  - Portfolios converge to a standard
  - Efficient and effective
  - Still allows for flexibility



## Equities (continued)

- Building a model equity portfolio
  - Risk mitigation and diversification. Standardisation and scalability
  - GICs – appropriate? Standard
  - Restrict universe and cap the number of stocks
  - Sector weightings & Preferencing system

GICS Sector(s)	Weights	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5
Materials & Energy	25%	BHP	WPL	ORI	NCM	RIO
Consumer Staples & Discretionary	25%	WOW	DJS	MTS	WES	
Health Care	25%	CSL	COH	SHL		
Financials	25%	WBC	CBA	ANZ		





## Equities (continued)

- Stock selection – quantitative measures
- Stock selection – qualitative measures
- When to exit a stock
- Scoring system



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## CONCLUSION

Importance of:

- Diversification
- Holding adequate cash
- Gradual execution
- Having sound reasons for each action
- Regular client engagement
- Limited use of Collective Investment Vehicles



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## CONCLUSION

Financial planning is about guiding the creation of wealth and maintaining this wealth. For most, wealth creation comes from the ‘fruits of our labour’ and not the execution of risky investment programs.

Actuaries can provide a financial framework including measures like the ‘Net Worth Consumption Rate’ to guide clients forward.