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JOURNAL of Financial Planning IN INDIA

FEBRUARY 2021

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What's Inside...

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February Journal Letter from Noel Maye, CEO, FPSB LTD.

It is hard to believe that February is already upon us. I trust it's not too late to wish you every success for the year ahead, or too early to celebrate the prospect of returning to a more connected world. As we anticipate our governments and healthcare systems getting more control over the global pandemic, I'd like you to think about the significance of new beginnings. It was the legendary financier John Pierpont "J.P." Morgan, who famously said, "The first step towards getting somewhere is to decide you're not going to stay where you are."

Although the global economy is recovering from the impacts of last year's pandemic, the landscape has changed dramatically for all of us. As the World Bank noted in its January 2021 *Global Economic Prospects Report*, "Making the right investments now is vital both to support the recovery when it is urgently needed and foster resilience. Our response to the pandemic crisis today will shape our common future for years to come."

Although challenged, COVID-19 didn't keep the global or Indian financial planning profession from reaching important milestones. I've heard from many CFP professionals around the world about how they have turned obstacles into steppingstones. Whether guiding clients on how best to navigate the volatility of the markets or their personal financial situations, or helping them adjust current strategies to stay on track for the future, CFP professionals deserve to be saluted for showing up for and standing by their clients.

As we look ahead to 2021, it's important to remember that your clients will continue to be looking to you for reassurance, for guidance, and for creative solutions to financial and life goals in the year ahead. Let them know they don't have to make these decisions alone.

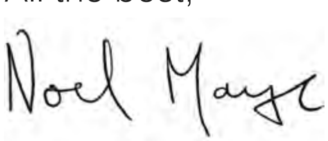
At FPSB, we are committed to carrying forward our vision for the financial planning profession and CFP certification in India in 2021. I'm especially pleased about the appointment of Rajesh Krishnamoorthy as Country Head of our India liaison office, effective the 1st of February.

If you haven't already heard, Rajesh brings 20 years of experience in India's financial markets, including the last decade with wealth management fintech platform iFAST Financial India Pvt. Ltd., as the founding employee, Managing Director, and most recently Vice Chairman of the Board of iFast India Holdings, Singapore. His areas of expertise include treasury, institutional sales, private wealth management and personal finance-related technology, not to mention a deep familiarity with the work of the Securities and Exchange Board of India and the National Institute of Securities Markets.

Among the many initiatives Rajesh has planned, his main areas of oversight will focus on strengthening FPSB operations and strategy; growing FPSB certification programs; and building support to establish and grow the financial planning profession in India, with CFP certification as its symbol of excellence.

As Rajesh settles into his new role, please take a moment to welcome him to the FPSB family. And please know that we are all committed to supporting and promoting you as you deliver best-in-class financial planning services to your clients in 2021 and beyond.

All the best,



Noel Maye
Chief Executive Officer
Financial Planning Standards Board Ltd.

Welcome Message from Rajesh Krishnamoorthy, FPSB Country Head, India

To say that I'm excited to join the FPSB leadership team would be an understatement. Over the course of my career in the financial services profession, I've always held the work of CFP professionals in the utmost esteem. Your dedication to the highest ethical standards and commitment to delivering innovative solutions is well-known across the financial industry, and I'm honored to contribute to your ongoing success.

As an important next step, we must all work together to further our mission of establishing financial planning as a global profession and the CFP marks as the global symbol of excellence in financial planning. To this end, we will be taking a closer look at how our operations and strategic vision support our organizational objectives. In particular, we'll examine what aspect of the organization need improvement; and we'll be working in close collaboration with you as we chart our course for the future.

Another top priority for FPSB in the coming months is to grow and strengthen our certification programs. The past 12 months have forced us to find innovative ways to continue the important work we've been doing. As an organization, we have risen to the occasion. But there's still more we can do to make sure all of our colleagues are able to virtually participate in our certification programs and to access asynchronous continuing education opportunities.

Meeting our strategic goals for the future means that we need to strengthen our relationships with partner organizations, create thought leadership that reinforces the importance of CFP certification, and continue advocating on behalf of CFP professionals with regulators, legislators, and policymakers.

The journey of a thousand miles begins with one step; and I look forward to embarking on this odyssey together.

Rajesh Krishnamoorthy
Country Head, India Liaison Office

About the Journal

The purpose of the *Journal of Financial Planning in India* is to expand the knowledge base of CERTIFIED FINANCIAL PLANNER^{CM} professionals and those interested in the profession.

Future contributions will span a variety of areas including industry interviews, viewpoint columns, insightful articles and peer-reviewed technical papers. We wish to provide content that is interesting, original and, most importantly, beneficial to CFP^{CM} professionals and their work on behalf of their clients.

Journal of Financial Planning in India is published by Financial Planning Standards Board Ltd. (FPSB Ltd.)

FINANCIAL PLANNING STANDARDS BOARD

Call for Articles

Writing Guidelines for Contributions

Articles:

We welcome previously written work and ideas that pertain to one of the areas of financial planning: tax planning, debt management, cash flow management, ethics and legal and regulatory environment, education planning, retirement planning, investment planning, insurance planning, and estate planning.

The articles should be of about 1500-3000 words in length with the goal of having an article between 6-8 pages long within the Journal, including all photos and graphics. Articles must be written in English and be relevant to Indian CFP℠ professionals and/or the global CFP community.

Audience:

You are writing for people like you – other CFPCM professionals! Please provide timely and accurate information that has practical implications.

Style:

The Journal of Financial Planning in India is focused on providing and promoting easy-to-comprehend, professional written work. A contributor's thoughts, comments, ideas, and graphics should be easy to understand and structured for flow.

Elements to be included for submission:

Publication date, June 2021. **Article due date: 30 April 2021.**
Publication date, September 2021. **Article due date: 31 July 2021.**
Publication date, February 2022. **Article due date: 31 December 2021.**
Send to: IndiaCFPCertification@fpsb.org

Format: When submitting an article, please include: author name(s), mailing address, email address, phone number, author picture, brief biographies of the author(s), and an executive summary.

Executive Summary: The executive summary is not a sales pitch for the article, but instead, a summary telling the reader what to expect, the purpose, the topic, the why, and the important practitioner implications. Executive summaries should be no more than 250 words.

Graphics: No more than 5 photos and graphics per article.

Endnotes/References: Please be sure to use APA formatting for references and endnotes.

Authors of published articles will get 5 CPD POINTS

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World Financial Planning Day: Leveraging the Strength of the Global CFP Community

Last 7 October, thousands of financial planning professionals from across the globe came together for the fourth annual World Financial Planning Day (WFPD), organized by the Financial Planning Standards Board Ltd. (FPSB) and its global network of affiliate organizations. Each year, WFPD coincides with World Investor Week (WIW), an initiative coordinated by the International Organization of Securities Commissions (IOSCO).

In light of the market volatility of 2020 caused by the COVID-19 global pandemic, the goal of WFPD was three-fold: to help raise awareness of the value of financial planning during uncertain times, to highlight the importance of creating a financial plan and to demonstrate why it's critical to work with competent and ethical financial planners who are committed to putting their clients' interest above their own.

During the campaign, Noel Maye, CEO of FPSB, also stressed the importance of staying on course in these turbulent times, saying: "As we continue to deal with a global pandemic, more people are feeling life and financial stress, looking to an uncertain future while dealing with a volatile present. This year, it is more important than ever to raise awareness of how financial planning can help people prioritize and address short-term needs, framing those actions in the context of longer-term goals."

First-Ever Live Panel Event

This year's WFPD also featured a live global panel event hosted by FPSB for financial planning professionals to discuss one of the most pressing issues in

2020 - the Future of Financial Planning: Adapting to a New Normal. The two-hour event featured presenters from seven countries - among them Hansi Mehrotra, CFA, founder of The Money Hans based in India - to explore topics such as adapting to a client's changing needs, managing client relationships in the virtual world and the myriad forces shaping the financial planning profession worldwide.

New website for WFPD boosts visibility and engagement

This past year, FPSB upgraded www.WorldFPDay.org to improve engagement with the FPSB Network's WFPD campaigns and programs. Among the enhancements, we implemented the "Live Your Today. Plan Your Tomorrow" branding, upgraded the navigation menus, added a comprehensive campaign toolkit for FPSB Affiliates, and featured a variety of consumer-oriented articles and resources focused on four topic areas: *Financial Planning is For Everyone, Plan to Reach Your Goals, Protect Your Financial Future and Get the Help You Need*.

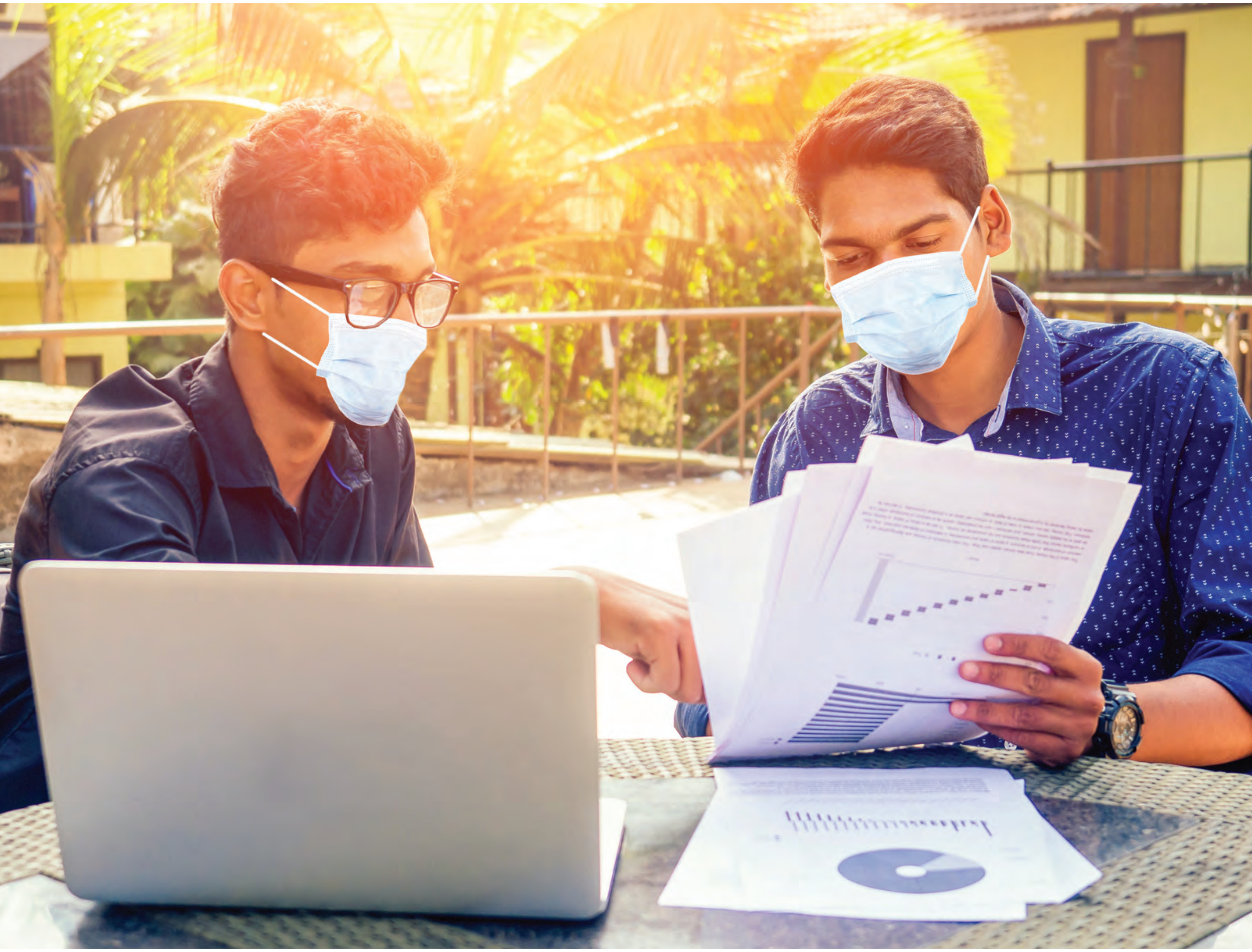
Our work paid off - leading to a considerable increase in web traffic and user engagement, particularly among our audience in India. To illustrate, compared to the previous year, web traffic from India in 2020 increased by 10% (i.e., visitors entered the URL directly); organic search traffic increased by 131%; the number of first-time users increased by 29%; overall page views increased by 23%, with unique page views going up by 27%; and the total number of sessions increased by 32%. Indian CFP professionals were extremely engaged on social media as well, posting and sharing WFPD content from both FPSB global and FPSB India social platforms.

Keeping up the momentum from 2020

We want to encourage you to continue visiting www.WorldFPDay.org to access all of the valuable information available - and not just from the event, but resources that can also support your ongoing work with clients. Learn how to fight financial stress during uncertain times, for example, from the articles and resources that are available, and make sure to stay connected with our global network of CFP professionals.

Stay tuned for more information about World Financial Planning Day 2021!

Our Work With Clients



Decoding the Time Value Concept

By Varadarajan R, CFP[CM]

The primary responsibility of a financial planner is to identify the needs or financial goals of the client and to translate them to identifiable monetary values. Mastering the skills and comprehending time value of money (TVM) becomes essential for a successful financial planner. In this article, our focus would be to answer certain puzzling questions we face while solving the questions related to TVM.

Time Value of Money

We are all well aware of the fact that money has time value. A Rupee in hand today is more valuable than the promise of a Rupee at a later date – say five years. An investor expects to receive something more than what he or she had invested in view of the following:

- Sacrifice: The person who parts with the money sacrifices the pleasure of spending it today, and they need compensation
- Inflation: Due to inflation, the price of the item he or she could buy today could be higher later
- Risk : Regardless of where someone invests, there is an element of risk of default for which they would expect some compensation – i.e. a risk premium.

All these aspects decide the amount of compensation, which is expressed in the form of percentage known as the rate of interest. The period of time for which an investor would like to part with his money is called tenure.

The amount this investor is willing to part with (i.e. investment or savings), together with the rate of interest and tenure determines the level of compensation an investor expects to receive. The subject of TVM deals with all these aspects. An investment amount could be either made in one lump sum, or in periodical investments or a combination of both.

The investments or savings are made either towards a financial goal or without any goal. In either case, the idea is to utilise or withdraw the accumulated funds generated through investments at a future date for a desired purpose. The withdrawal could be either lump sum or a series of payments to meet periodical requirements or a combination of both.

The future value (FV) of a single instalment or the present value (PV) in today's term of amount receivable on a future date, can be represented mathematically as under:

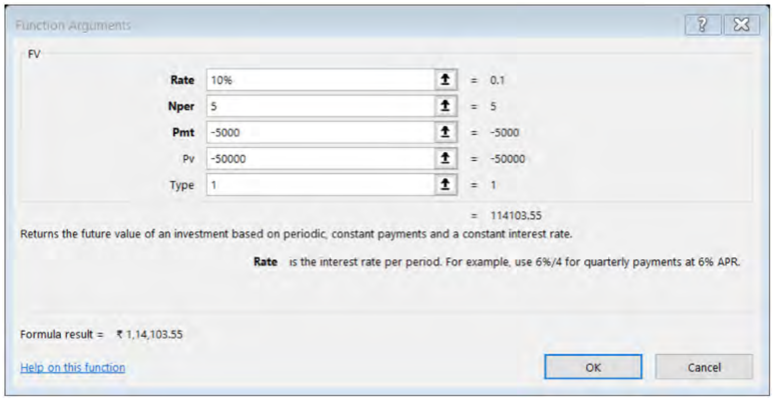
$$FV = PV1 + r^n \quad \text{or} \quad PV = \frac{FV}{1 + r^n}$$

Where PV is the single investment made initially, FV is the accumulated future value, r is the rate of interest and n is the period of investment.

Since the investments or savings could be either single payment or equal periodic instalments, the FV is calculated either with a financial calculator or spreadsheet to get the values quickly, instead of cumbersome calculations. Below, we shall restrict ourselves to the use of Excel spreadsheets. The terms or the notations used in the computation are listed below:

Spread Sheet Signs	Description	Explanation
Rate (% to be mentioned)	Rate of Interest applicable	The aspect of compounding will be highlighted here
Nper	No of periods	The tenure of investment
PV	Present value	Lump sum amount invested
Pmt	Periodical payments	Amount invested periodically
FV	Future value	Total accumulated value with interest
Type -1/0	Begin/end	Choice of when the cash flow occurs- at the beginning or at the end of the period

For example, at the rate of 10% per annum, if an investment of 50000 is made today together with annual investments of Rs.5000 at the start of the year, the accumulated amount at the end of the period would be Rs.114103.55.



One can think of a plethora of investment and interest payments besides the tenure and we shall elaborate how these are to be incorporated so as to arrive at the correct result.

Rate : Rate of interest could be either nominal, effective or applicable – and it changes according to the frequency of compounding/interest payment as well as the investment.

Let us assume, the rate of interest in percentage is "r" and the tenure is "n" in years.

Frequency of compounding	**Frequency of investment**	**How to represent in the rate in Excel**	**Actual notation in Excel**
Annual	Annual	Actual rate in percentage	r
Monthly	Monthly	Convert rate to monthly by dividing by 12 and the tenure into months	Rate = r/12 & Nper = n*12
Annual	Monthly	We have to use the nominal rate formula and tenure to months	Nominal (r,12)/12 Nper =n *12
Monthly	Annual	We have to use the effective rate formula	Effect (r,12)

Note: In case the frequency changes to every six months or quarterly instead of monthly, we shall be using 2 or 4 instead of 12 in all the above cases. Now, let's add a twist. What do we do if the interest is compounded quarterly and the investment is made monthly? Simple. Convert the interest to an annual effective interest and then use the nominal formula on that interest rate as explained in the table above.

Example: If the nominal rate of interest is 10% per annum. compounded quarterly, and the periodic investment is made monthly, then,

Step 1 : Find the effective interest = EFFECT(10%,4) = 10.381%

Step 2 : Use monthly interest with nominal formula = NOMINAL(10.381%,12)/12 = 0.8265%

Nper would be in terms of number of months.

What do we do if the interest is compounded monthly, while the investment is made quarterly? Simple, again. Find the quarterly effective interest and use the number of quarters in the Nper.

Example : If the nominal interest is 10% per annum compounded monthly and the periodic investments are made quarterly, then,

Step 1: Find the effective interest = EFFECT(10%,12) = 10.471%

Step 2 : Use the quarterly rate = $\frac{10.471\%}{4}$

Nper would be in terms of number of quarters.

Nper : This represents the number of periods for which the investment is made, and changes according to the frequency of the investment , as indicated in the table above.

Pmt: Denotes the equal periodical payments made towards investment or withdrawal from a corpus repayment of a loan. Payment could be monthly, quarterly or every six months. The rate (r) and tenure (Nper) should be used as discussed in the earlier paragraph to match the frequency of payment.

PV/ FV: PV is the initial investment or it is the value of future receipts in today's terms. FV is the accumulated value of a single investment or a series of investments, together with interest. Alternatively, we can find the one time investment required to get a specified corpus at later date, given tenure and the interest rate called the “discount rate”. One can either accumulate funds through single investment (PV) or a series of equal payments (Pmt), in the accumulation phase, and/or he can withdraw the accumulated corpus through single payment (FV) or through a series of equated payments called annuities (Pmt) in the distribution phase.

Present Value is used to find:

- The Insurance amount required based on the income/expense replacement
- The amount to be invested in a lump sum to reach a goal specified as FV
- The corpus required to receive a specified annuity for specified tenure

When the investment horizon differs from the tenure at when funds are required for a specified goal, then, the best option would be to use the present value concept for both these to so as to match the horizons.

Example : Suppose the educational expenses are required annually after 10 years for 7 years and the monthly investments are made towards this from now till the 10th year or 9th year, then we need to bring all these expenses as well the value of periodical investments to PV.

Future Value is used to find:

- Inflation adjusted income after specified period
- Corpus generated from a single investment or periodical payments
- To calculate the maturity value of a unit-linked insurance plan (ULIP)

Type 1 or 0: The concept of “type”, which identifies when the investments are made plays a vital role in the entire calculation process since an incorrect concept could affect the outcome significantly. Logically, if the investments are made at the beginning, the resultant corpus could be higher than the situation where the investments are made at the end of the period since there would be an element of interest for one period. The choice of “Type1” or “Type 0” needs to be made on a case-by-case basis, where we can broadly categorize the selection as under:

TYPE 1 or BEGIN Mode:

We generally use “Type 1” or “Begin” mode in the following cases:

- When we need to calculate the FV in cases where the indications are “investment”, “invests immediately” or “invests from today”
- When we are calculating the “retirement corpus” required for the periodical post- retirement expenses.
- When we need to calculate the “annuity due” from a corpus or annuity policy
- When calculating the tentative maturity value of an insurance premium or return on the investment part of the ULIP or endowment policies based on the premiums, since premiums are paid in advance
- When calculating the “insurance needs” or “quantum of insurance required” based on the current income and/or the future needs
- When we need to assess the specified financial goals like “annual/periodical educational expenses” or “vacation expenses”
- When we use rent receipts and reverse mortgage receipts for certain cash flow-related calculations as these are generally presumed to be received at the beginning of the period

Type 0 or END Mode:

We generally use “ Type 0” or “ End” Mode in the following cases:

- When we need to find the corpus of FV through periodical “savings”
- When we need to calculate the EMI or repayment of a loan as all the loan repayments are expected to be happening at the end except in the case of deferred repayment schedules.
- When we have to calculate the “ordinary annuity” or “ immediate annuity” from a Corpus.
- In the case of bonds, coupon receipts are expected to be receivable at the end of the coupon payment term.
- The interest receipts from banks and financial institutions are assumed to be happening at the end of the period.

Other Issues

Net Present Value (NPV): In all the cases discussed above the periodical cash flows or payments are equal and regular. In the case of certain investments, we cannot expect equal or regular returns. We could even see a negative return. NPV is used to evaluate the value of the investment and its suitability. NPV is given by the formula:

$$NPV = C_o - \sum_{n=1}^{n} \frac{Cn}{1 + r^n}$$

Where C_o is the initial investment/outflow, C_n is cash flow in the subsequent years and r is the required rate of interest or discount rate. NPV is nothing but the sum of Cash outflows and inflows discounted to their present value The positive NPV is suitable and higher the NPV, better is the investment.

While using the NPV formula in the Excel, remember to exclude the cash flow of the first year in the formula and add the first year cash flow to the result since, the formula assumes that the cash flows happen at the end of the year.

Internal Rate of Return (IRR) : Internal rate of return (IRR) is used to compare the advantages between different project or investments where the investments are made and returns are received periodically and the investment is held till the end. To compare the investments or projects, the entire set of cash flows are discounted to arrive at the present value. IRR is that discount rate at which the intervening cash flows are to be reinvested so as to make the NPV of the set of cash flows to zero.

Suppose r is the IRR then,

$$NPV = \sum_{n-0}^{n} \frac{Cn}{1 + r^n} = 0 \text{ Where } Cn = \text{Cash Flow for year } n \text{ and } r = IRR$$

Higher IRR indicates that the project or investment is better.

IRR and XIRR: The calculation of IRR assumes that the cash flows occur every year on the same date as the first flow. Since this may not be the case always, the concept of XIRR comes to our help, as it takes into account the various dates the cashflows occur and the interest component for the fraction of the year. Even if there is a single cash flow with a different date, it would be prudent to use XIRR to avoid confusing results.

Future Value : If we need to find the future value of the savings which happen annually and quantum increases at a fixed percentage, we use the growing annuity formula, which is given by:

$$\text{Furuture Value} = A^*[\frac{1+R^n-1+g^n}{1+R-1+g}]$$

Where A = First Instalment, R = Rate of Interest, g = rate of increase and n = investment period.

The formula assumes that the periodical payments happen at the end of the year. In case the investments happen at the beginning, the first term A should be substituted by A*(1+R)

Real Rate of Return (RRR): Whenever the concept of inflation is to be taken into account, like inflation-adjusted payments for retirement corpus, we need to use the Fisher's equation to find the RRR and use this rate instead of ROI. Fisher's Equation is given by

RRR = $RRR = \frac{1+R}{1+i} - 1$

where "R" is the Rate of Interest and "i" is the Inflation.

Conclusion

We have discussed some of the essential aspects of TVM. This is an important concept in financial mathematics – one that is related to topics such as discounting, asset pricing, portfolio management and risk management.

Financial Mathematics is a branch of applied mathematics where the mathematical techniques are used in the field of finance for efficient financial management – a field that has grown into its own separate academic wing over the past few decades Given the rapid growth of domestic and international financial markets, it should come as no surprise that many of these topics are relevant today in the field of financial planning.

Equity Valuation Models - Simplified

By Srikrishna, CFP^{CM}

Understanding the basic concept of value investing is simple. Buy a stock when its price is less than its intrinsic value, and hold it for the long term. Intrinsic Value, also known as fundamental value, is the price that an investor who is fully aware of its characteristics would pay for the stock.

But, how do we actually determine this intrinsic value of a stock?

That was the first and the most important question I faced after reading all the popular books and articles on value investing out there.

In this article, I have tried to explain the three popular equity (stock) valuation models, how and when to use them, and their various shortcomings. These are the Discounted Cash Flow (DCF) Model, the Multiplier Model and the Asset Based Model.

Before we do that, here is a list of assumptions that must work in our favour for any of these valuation models to work:

- Some stock prices vary significantly from their fundamental value
- This mispricing is not an indication of some underlying characteristics of which we are unaware
- We are confident in the quality of the estimated inputs used
- We believe that the price will move towards the fundamental value within our investment time horizon

DCF Model

In the DCF model, the intrinsic value of a stock is the present value of cash flows expected from the stock (dividends / free cash flow to equity - FCFE) discounted at the required rate of return. FCFE is the cash available after the firm meets its capex and other obligations. Also, free cash flow to equity can be used when the dividend payment estimates are uncertain, and earnings growth rate can be reasonably predicted.

Example: Vedanta Ltd. is currently trading at Rs.144 and has recently declared a dividend of Rs.18 per share. It has been paying dividends consistently over the past few years and we assume that the company is going to pay dividends for at least the next five years. Our required rate of return from equities is, say, 10% per annum.

Case 1 : The dividend is expected to grow by 5% per annum and five years later the stock price will be around Rs.230.

Year	Dividend	Sale Proceeds	Total Cash Flow	Present Value Discounted @ 10%
1	18.90	0	18.90	17.18
2	19.85	0	19.85	16.40
3	20.84	0	20.84	15.66
4	21.88	0	21.88	14.94
5	22.97	230	252.97	157.08
			Intrinsic Value	Rs. 221.26

The discounted present value of the stock arrived at by using the DCF Model is Rs.221, but the stock is currently trading at Rs.144, which suggests that the stock is undervalued.

Case 2: The dividend of Rs.18 is expected to grow constantly at 5% per annum.

Intrinsic value of the stock = (next year's dividend) / (required return - growth rate) i.e. (18.90) / (0.10 - 0.05) = Rs.378

Readers may note that this formula will not work if the dividend growth rate is higher than our required rate of return.

Case 3: The dividend of Rs.18 is expected to be paid indefinitely and you do not wish to sell the stock.

Intrinsic value = dividend amount / required rate of return i.e. (18/0.1) = Rs.180

If we are not sure of the firm’s dividend paying capacity, we can replace dividends with FCFE per share and other calculations remain the same. We can also combine these formulas for a company that might experience extremely high growth rate at first, and then slow down to a constant percentage.

Limitations: This model is highly dependent on the quality of inputs and is also sensitive to changes in the estimates.

Multiplier Model

In this model, the valuation is determined by either a ratio of price to some fundamental metric or a ratio of enterprise value-to-EBITDA or revenue. The most common ratios are price-to-earnings, price-to-sales, price-to-cash flow and price-to-book value. Enterprise value is simply the cost of acquiring the company as a whole today (i.e. the market value of its stock and debt minus its cash and short-term investments).

This multiple is then compared to the historical averages of the same stock, or with stocks of the peer group / industry averages.

Example: ITC, at a market price of Rs.213, has a P/E multiple of 17.39x. This effectively means that we are paying Rs.17 for every Rs.1 of the company's earnings. Now let's assume that ITC’s historical P/E is around 18 and its competitors have an average P/E of 19. By this we may reasonably conclude that ITC is slightly undervalued.

Limitations: In this model, the ratios must be compared to either peer group companies or to an industry average, which means these ratio are dependent on the availability of peer group data / comparable firms. Even accounting methods must be similar across companies for the comparisons to work. Also, the multiplier approach may be inappropriate for cyclical firms.

Asset-Based Model

In this approach, the intrinsic value of a stock is calculated as the total asset value less liabilities and preferred stock, as per the numbers reflected in the company's balance sheet. This approach is best suited for private companies with tangible assets or assets whose market values are readily available.

Example: If a company X has assets of Rs.1000 million, liabilities of Rs.500 million and 1 million outstanding shares, then the intrinsic value per share can be calculated as (assets - liabilities) / (number of outstanding shares) i.e. (1000 - 500) / (1) = Rs.500.

Limitations: Most often the book values do not reflect the actual value. Also, this model cannot be used when the firm has a high proportion of intangible assets.

Summary

It is always better to use multiplier models with different inputs and come up with a range of possible values rather than a precise estimate. These methods can be interesting to learn. But, as is the case with everything in life, only skill and experience – gained through years of trial and error – can help you judge the actual intrinsic value.

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INVITED REVIEW

WILEY

The household CFO: Using job analysis to define tasks related to personal financial management

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Abstract
Household financial management has several criteria of performance that makes it possible to evaluate the relative effectiveness of an individual in the particular job. To date, there has been little analysis of the myriad tasks and behaviors that are included in the role of a household financial manager, or what we term household chief financial officer (HCFO). Using techniques from industrial psychology and personnel selection, namely job analysis, the current article provides definitions of categories of critical tasks and behaviors of the HCFO job using two studies. The results of the studies identified the frequency of engagement of financial tasks across the two samples, and the importance of tasks associated with financial success.

KEYWORDS
financial planning, industrial psychology, job analysis, personal financial management

Accumulating wealth over the course of one's lifespan is a common goal (Ameriks, Caplin, & Leahy, 2003). How do individuals succeed in the pursuit of this or any other financial goal? The search for an answer to this question has been at the root of numerous psychological and economic studies (e.g., Ameriks et al., 2003; Carducci & Wong, 1998; Grable, 2000; Klontz, Seay, Sullivan, & Canale, 2014). What is missing in the literature is the profile description of what might rightly be called a household chief financial officer or HCFO. What tends to emerge from previous studies are descriptions of psychological differences between and among high net worth and high income individuals, explanations of wealth accumulation tied to financial literacy, and other narratives describing the macroeconomic factors that shape wealth inequality. Few studies have viewed the role of HCFO from an industrial psychology perspective.

In this article, we present an example of how a job analysis can be applied to major financial life activities to identify (a) critical tasks associated with those activities and (b) the frequency of performing those tasks within two samples. Particularly in the domain of household financial management, where households tend to manage day-to-day financial management tasks independently, job analysis provides a scientific approach to determining critical tasks and what HCFOs should focus on in an effort to improve household financial outcomes. In the context of the current study, we focused specifically on identifying tasks that are frequent and important for successful performance of the HCFO job as a first step to identifying predictors of financial success.

1 | BACKGROUND

1.1 | State of personal finance in America

Nearly all adult Americans manage some, if not all, of their household's day-to-day financial decisions (Grossbard-Shechtman, 2003). Even so, both perceptions of competence in and knowledge of what constitutes appropriate financial management alludes many Americans (Hilgert, Hogarth, & Beverly, 2003; Perry & Morris, 2005). Financial confidence, across the population, tends to be low, with the result being greater personal and household stress (Dew, 2008) and problematic financial decisions and behavioral outcomes (Robb, Babiarz, & Woodyard, 2012). Consider the results from a survey of household consumer finances, conducted by the Certified Financial Planner Board of Standards, Inc. (CFP) and the Consumer Federation of America (CFA). Survey data showed that, in 1997, 50% of Americans indicated they planned to retire before the age of 65. The survey was administered during a period of economic expansion, resulting in general rising perceptions of affluence. By 2012, only 34% of respondents reported that they were on track to retire before age 65 (CFP Board & Consumer Federation of America (CFA), 2012). The same study found that in 2012 over 50% of Americans believed they did not make enough money to have an active saving plan, whereas 52% noted that they felt investing was too complicated. Nearly 60% of respondents in the study reported that it was difficult for them to determine who to trust for financial advice.

1.2 | The role of financial literacy

The general lack of financial confidence exhibited by HCFOs has been attributed to the general low levels of financial literacy among Americans. Although the terms financial literacy, financial education, and financial knowledge are often used interchangeably, the general consensus is that financial literacy includes two elements: knowledge and the appropriate use of the knowledge (Huston, 2010). Lusardi and Mitchell (2014) argued that financial literacy, in addition to being a mechanism of wealth accumulation, is also a form of human capital investment. Their insight, developed from the work of Lusardi and Mitchell (2014) and Lusardi, Michaud, and Mitchell (2017), lends support to the notion that investment in financial education allows individuals to make better financial decisions. In support of this notion, Huston (2012), observed that those deemed to be financially literate were nearly two times more likely to report holding lower cost loans (Huston, 2012). In another study, Von Gaudecker (2015) reported that those who exhibit high financial literacy report holding suitable risk-adjusted portfolios.

Despite the literature that shows a clear association between possessing some degree of financial literacy and better household financial management decisions and outcomes, there are few models to assist household financial decision makers (and those who provide advice to households) make appropriate decisions that lead to superior financial outcomes. Stated another way, there are few empirically tested models that provide guidance on how someone can become an effective HCFO. Instead, the literature has generally been focused on developing valid and reliable measures of financial literacy, and then using scores from literacy tests and scales to evaluate decision outcomes. While interesting and valuable, this has left a gap in the literature in describing the characteristics of HCFOs who have or will likely be in a position to accumulate wealth over the lifespan.

1.3 | Success in financial management

While the domains of household financial management can be differentiated, the tasks of the individual responsible for those domains are much more varied and complex. Indeed, the HCFO has a myriad of responsibilities not captured adequately by differentiating the areas of financial management. For example, the specific aspects of budgeting can be refined as estimating and tracking income and expenses, as well as creating decision systems or heuristics for the allocation of a household's resources. HCFO roles can also encompass more complex duties, such as deciding on the amount of insurance coverage to purchase, making judgments regarding the risk profile of a portfolio, and deciding between and among short-, intermediate-, and long-term spending choices. A competent HCFO must have a basic understanding of concepts related to cash flow and net worth management, tax planning, insurance management, investing, retirement, and estate planning, as well as specialized family needs, including education planning and mortgage financing. Of course, a HCFO can elect to outsource some or all day-to-day decisions in these domains, but it still remains true that the HCFO must have a basic understanding of each financial element in the household in order to know when to hire professional help and what type of professional to hire (e.g., financial planner versus an accountant).

The decisions of a HCFO can have far reaching implications. Performance in the role of HCFO can mean financial ruin if decisions are not managed properly. Criteria that can be considered as performance measures include accumulating wealth to ensure a satisfactory retirement, being financially independent from other family members and/or government agencies, ensuring security for future familial generations, having sufficient resources available to meet unexpected expenses, or some combination of these and other measures. In addition to these types of specific financial criteria, financial management decisions can also have an impact on each household member's well-being (Parrotta & Johnson, 1998; Xiao, Tang, & Shim, 2009). Specifically, those who report problematic financial outcomes are more likely to exhibit lower levels of financial satisfaction. In some cases, low quality financial decisions on the part of a HCFO can lead to decreased marital satisfaction (Kerkmann, Lee, Lown, & Allgood, 2000).

1.4 | HCFO as a traditional job

Within a household, someone must generally assume the role of or become the HCFO. Sometimes this choice is made by default. In some cases, more than one individual in the household assumes some of the responsibilities of this job. Regardless of the task appointment process, the HCFO has a responsibility to ensure budgeting, planning, and overall leadership related to the household's financial situation. While there are many similarities associated with being a HCFO and a traditional incumbent role, there are differences as well. Specifically, in the case of the HCFO role:

- It is not a job for which individuals are recruited.
- It is not a job into which individuals are selected; instead, it is considered a non-work-related function.
- It is a required role regardless of individual differences in interests, values, attitudes, personality, and other characteristics that might impact success in the role.

Despite these differences, it is reasonable to conclude that the HCFO role can be considered a *job* in a broad sense because it in many ways mirrors a traditional job:

- Like a traditional job, multiple objective criteria can define success, including net worth, savings percentage, and other outcomes; perceptions of success and job satisfaction can also be evaluated.
- Success can lead to demonstrable outcomes, such as the ability to retire by a certain age or having enough saved for a particular purchase, similar to success in a job leading to demonstrable outcomes, such as increased salary, a promotion, or a bonus.
- Performance as a HCFO may also be affected by the household "team." In other words, if the household includes more than one person, success may be dependent on the actions of other household members (i.e., team), as in some traditional job roles.
- Finally, there are a set of tasks that comprise the job and requisite competencies that are required to complete those tasks effectively, even if those tasks and competencies have not yet been identified systematically.

With these similarities in mind, managing a household's financial situation can be considered a job in the same manner traditional jobs are classified in the field of industrial-organizational psychology (Bailey & Jackson, 2011). Specifically, a *job* refers to the activities and tasks conducted by groups of individuals that have relatively similar functions (Brannick & Levine, 2002). By considering financial management as a job, critical tasks and behaviors can be identified and appropriate coaching and counseling can be developed to help individuals build proficiency in managing their household's financial situation. Likewise, criticality and frequency of tasks can be assessed through surveys of subject matter experts (SMEs) who have experience with and proficiency in the performance of the job.

1.5 | Job analysis and the HCFO role

It is possible to analyze the job of *personal financial management* in order to define the key tasks and related knowledge, skills, abilities, and other characteristics (KSAOs) that are critical to the job. This analytical process can assist members of a household (and those who provide advice to households) improve the opportunity for financial success. Understanding the key tasks, and the KSAOs to complete those tasks effectively, can help with a wide range of functions, including self-development and financial planning.

The first step in gaining a better understanding of what leads to success in a role involves identifying the key tasks associated with the job, in this case, the HCFO. Using the job characteristics model developed by Hackman and Oldham (1976), it is possible to categorize job features into one of five domains: (a) skill variety, (b) task identity, (c) task significance, (d) autonomy, and (e) feedback. The job characteristics model is premised on the notion that these five characteristics of a job affect the following three psychological states of an employee: (a) experienced meaningfulness, (b) responsibility for the job, and (c) awareness of outcomes (Grant, Fried, & Juillerat, 2010). In turn, these states affect the success of an individual within that role. This framework has been used widely in the field of industrial-organizational psychology when the goal of a project has been to understand the nature of jobs, with the outcome being a model that helps organizations find individuals that will be most likely to succeed in those roles and/or help individuals find career paths that are best suited to their characteristics. The method typically employed to understand the requirements and related competencies for a given job is *job analysis*.

A job analysis is "a purposeful, systematic process for collecting information on the important work-related aspects of a job" (Gatewood & Feild, 1999, p. 269). Job analysis has been used by industrial psychologists to divide a job into smaller elements for a variety of human resource (HR) purposes within an organization (Levine, Thomas, & Sistrunk, 1998). Job analysis involves breaking down a specific job into observable and verifiable behaviors that are performed, characteristics that define the environment in which the worker performs those behaviors, and the requisite competencies required to perform in the job (Harvey, 1991).

Job analysis is considered one of the foundational methodologies in the field of human resources, and serves as the basis for decision-making and job design, including: personnel section, recruitment, training and development, job design, job classifications, and promotion (Cascio, 1998; Levine et al., 1998). Job analysis often serves as the justification for hiring and promotion decisions when legal challenges are brought upon organizations for potential discrimination of protected groups (Gatewood & Feild, 1999).

There are multiple approaches that can be used to conduct a job analysis, most of which can be categorized as either task-oriented (i.e., focusing on work procedures) or worker-oriented (i.e., focusing on more abstract general human behaviors [see Harvey, 1991]). For the current study, and to ensure the results of the project were both empirically based and practical for application, we focused on a combination of techniques that involved analyzing both attributes and activities (Levine, Thomas, & Sistrunk, 1988).

The underlying premise of the current research study was that personal financial management is a job that nearly all adults are required to perform, regardless of whether they have the competencies to perform that job or have interest in doing so. Like a traditional job, there are objective criteria by which success in the job can be measured (e.g., income level, monthly savings goals, net worth goals, etc.). There are also tasks that must be performed (e.g., maintaining financial records, paying bills, generating revenue, spending money, etc.), and, therefore, there are clear competencies that relate to the ability and potential to perform those tasks and achieve success. The remainder of this article describes the methodology used to identify the tasks associated with being a HCFO and the results from the analytical process.

2 | METHOD

Multiple methodologies exist for gathering job-related data. The basic components of gathering job analysis data involve observations, reviews of past literature, survey research, and interviews/focus groups (Harvey, 1991) with subject matter experts including incumbents, supervisors, and job analysts (Muchinsky, 2008). The present study included critical incident data, job analysis surveys, and job expert research, as well as related data from national studies of similar jobs. The current article utilized the following methodology outlined by Gatewood and Feild (1999) for conducting a job analysis (given the unusual nature of the job, some modifications to the process were made):

- Review of available literature and past reviews of critical tasks (as available);
- Determine appropriate approach for the study of the HCFO job;
- Construct list of tasks;
- Refine task list to one that is manageable in size;
- Develop survey to administer to subject matter experts (SMEs);
- Collect data;
- Identify the most important and most frequently conducted tasks;
- Cluster tasks via statistical techniques; and
- Identify knowledge, skills, abilities, and other characteristics that are critical for performing tasks.

2.1 | Task survey creation

The task survey writing team consisted of two industrial-organizational psychology Ph.D.s who had extensive expertise in personnel selection, psychometric assessments, and survey creation, and one marketing research Ph.D., with extensive expertise in the evaluation of the behaviors, habits, and tasks of individuals responsible for household financial management decisions. The goal of the task statement writing phase of the study was to create a comprehensive set of tasks that would cover a wide range of financial management responsibilities, regardless of someone's current household composition, that might take place on a day-to-day basis. Additionally, the goal was for the task list to be comprehensive in nature, covering tasks that were deemed to be positively related to building or maintaining wealth over a long-term basis, as well as tasks that have been cited as generally being negatively related to accumulating wealth (e.g., borrowing money from tax-advantaged accounts).

To generate a list of tasks associated with household financial management, the team considered three main sources: (a) archival subject matter expert (SME) data, (b) task lists from related occupations, and (c) tasks from academic research. Each is described in more detail below. Each source is described in more detail below.

2.1.1 | Archival SME data

Focus group data, interview responses, and survey content and results were summarized from data originally used as the basis of four books: *The Millionaire Next Door* (Stanley & Danko, 1996), *The Millionaire Mind* (Stanley, 2000), *Millionaire Women Next Door* (Stanley, 2005), and *Stop Acting Rich* (Stanley, 2009). As these four books were conceptualized to be inclusive of a broad segment of the US population, especially those who primarily became wealthy without reliance on an inheritance, trust, or other unusual means over the past 40 years, data from these books served as the basis in which the subject matter experts (SMEs) identified the tasks that were associated with lifetime wealth accumulation. The survey, focus group, and interview data contained critical incidents and behaviors from over 14,000 individuals collected between 1980 and 2007.

2.1.2 | Task lists from related occupations

Two widely researched sources of job-related information were included as sources for the task survey. While these sources were focused on traditional jobs, the research team reviewed task statements to determine if they would be applicable to the job of HCFO. Selected statements from the following two sources were edited as needed:

1. The Occupational Information Network (O*NET)[1] database, developed and maintained by the US Department of Labor's Employment and Training Administration and the North Carolina Department of Commerce, contains task, competency, and work environment information for over 900 jobs. The database uses standardized language and descriptors for jobs, and can be used to search by specific skills, tasks, or behaviors. The database search included terms that could be considered part of the HCFO role, including: financial, family, budget, investing, counseling, and household. The following jobs were similar, in kind, to the types of responsibilities that a typical household CFO would have:
   - Child, Family, and School Social Workers
   - Educational, Guidance, School, and Vocational Counselors
   - Financial Analysts
   - Financial Managers
   - Home Economics Teachers, Postsecondary
   - Marriages and Family Therapists
   - Personal Financial Advisors
   - Residential Advisors
   - Treasurers and Controllers
2. The Occupational Outlook Handbook (OOH), which is published by the Bureau of Labor Statistics in the US Department of Labor (2013) and is revised every 2 years. The handbook summarizes information about occupational groups and includes more detailed information on work environment, training required, and related data for key occupations. Search terms similar to those listed above were included in the review, which resulted in the following job listings:
   - Administrative Services Managers
   - Bookkeeping, Accounting, and Auditing Clerks
   - Budget Analysts
   - Financial Analysts
   - Financial Clerks
   - Financial Managers
   - Information Clerks
   - Mental Health Counselors and Marriage and Family Therapists
   - Personal Financial Advisors
   - School and Career Counselors
   - Secretaries and Administrative Assistants
   - Social and Human Service Assistants
   - Social Workers
   - Top Executives

2.1.3 | Tasks from academic research

Several studies examining the relationship between common household financial behaviors and outcomes were reviewed, including previously used scales (Dew & Xiao, 2011), behaviors of college students (Xiao, Tang, & Shim, 2008), compilation of surveys of consumer finances (Hilgert et al., 2003), and surveys used with newlyweds (Parrotta & Johnson, 1998). The research team reviewed the job descriptions, and specifically the task statements associated with each of these roles, and insights from the literature, to find tasks that could be considered part of the HCFO role.

2.2 | Task list and review

The research team took lists from each of the sources as a starting point and combined or eliminated overlap when required. The list included tasks that were positive in nature (e.g., *create savings goals for retirement plans*), as well as tasks that were reported throughout the literature and research review as less than ideal for optimal financial management (e.g., *borrow money from friends to pay for large purchases*). After this step, the list contained approximately 280 tasks.[3] Each task was reviewed by the research team to ensure (a) each task statement was free from gender, age, or ethnic group bias; (b) the statement

TABLE 1 Broad task categories for the HCFO role

Planning	Financial responsibility	Problem solving and decision making	Working with others
Budgeting—Prepares, uses, reviews Investing—Collecting, diversifying, employer savings, general, real estate, risk-taking, securities Organizing Planning Managing taxes	Ensuring security Generating revenue—General, managing career, entrepreneurship Living frugally Maintaining assets Monitoring Saving Spending—Off retail shopping, planning to shop, shopping self-control, using discounts	Financial decision making Leveraging technology Outsourcing Researching/practicing Using credit/debt—Automobiles, credit cards, home, loans	Donating Financial mentoring Leading Negotiating/disputing Reliance on others

TABLE 2 Example of task statements by task categories

Task category	Example task statement
Planning	Develop and follow an overall financial plan to reach personal financial goals.
Financial responsibility	Consult budget to determine amount available for shopping prior to purchasing items.
Problem-solving and decision making	Evaluate risks and returns of investment opportunities thoroughly before investing.
Working with others	Provide advice and mentoring on how to save money to family members.

contained one unique task; and (c) the statement was clear and understandable. A second review was conducted to identify any duplications in the tasks. The final list contained 259 tasks (see Appendix) that spanned four general categories, as shown in Table 1.

Examples of task statements are shown in Table 2. For the purposes of the study, the survey instrument (described in more detail later in the article) randomized the presentation of the tasks across the different categories and subcategories. Likewise, the survey instrument only presented tasks that were relevant to participants by including skip logic in the survey. For example, tasks that included any reference to another household member such as a spouse or significant other were only asked of participants if they responded that there was such a member in their household.

2.3 | Study 1

2.3.1 | Participants

Participants in Study 1 included individuals from a panel of individuals who participate in ongoing Affluent Market Institute research. This panel consists of people who have an interest in and familiarity with the books written by Dr. Thomas J. Stanley. In 2013, 648 individuals were contacted to participate in the study. Of these, 113 completed the first survey, which included questions regarding demographic composition. The final sample included 82 men and 27 women (four did not disclose their gender), who were primarily White (85%) and had an average age of 40.96 years (SD = 10.37 years). The median income and net worth for this sample was \$174,999.50 (SD = \$124,687.59) and \$450,000 (SD = \$1,499,560.91), respectively.

Participants took four different surveys across a three-week period in 2013. In each case, participants were given a \$4/survey charitable contribution incentive to participate. While 113 participants completed the first survey, 99 completed the second survey (dropout rate of 12%), 87 completed the third survey (23% dropout rate), and 73 completed the final survey (35% dropout rate).

2.3.2 | Task survey ratings

Participants were asked to rate each task statement using the following instructions: "Please rate each task below in terms of importance to becoming financially independent and how often it is performed in your household (by you or your spouse/significant other, if applicable)." Importance was rated on a 7-point scale ranging from 1 ("Critical not to do this") to 7 ("Critical to do this"). Frequency was rated on a 5-point scale ranging from 1 ("Never") to 5 ("Very Often/Always").

2.4 | Study 2

The purpose of Study 2 was to assess the validity of the task statements from Study 1. Specifically, Study 2 was used to determine if (a) the tasks found in Study 1 were also engaged in frequently by a different sample, and (b) the critical tasks, as rated by SMEs and identified in Study 1, were engaged in frequently by a sample of individuals that were more representative, in terms of income, of the broader US population, which was approximately $52,000 at the time of the study (Noss, 2014).

2.4.1 | Participants

Participants in Study 2 included 157 individuals from Amazon's Mechanical Turk (mTurk) service who completed surveys in 2014. The individuals were first screened for participation by having them respond correctly to a question regarding net worth. The question was used to screen out individuals with minimal financial knowledge. Participation also required respondents to be responsible for the financial management decisions made within their household.

The final sample included 85 men and 69 women (three participants did not disclose their gender), who were primarily White (85%) and had an average age of 39.74 years (SD = 11.83 years). The median income and net worth for this sample was $60,000 ($SD$ = $40,713.11) and $50,000 ($SD$ = $400,241.46), respectively. The participants received a notification via mTurk and/or an email asking for their participation in a follow up study in exchange for $2.00.

2.4.2 | Task survey revisions

Prior to the administration of the task survey in Study 2, the research team re-examined the task list to determine if a further reduction in the number of tasks could be made in order to decrease the length of the survey instrument. Task statements that were similar in nature and had similar frequency and importance ratings in Study 1 were combined and/or eliminated. This resulted in the reduction of the original list of tasks to 232 task statements. The shortened survey was used in Study 2.

2.4.3 | Task survey ratings

Participants were asked to rate each task statement using the following instructions: "Please respond to each of the following statements by indicating whether you perform the following tasks." Frequency was rated on a 5-point scale ranging from 1 ("Never") to 5 ("Very Often/Always").

3 | RESULTS

3.1 | Study 1

Table 3 shows the 20 financial tasks rated highest by *frequency* in Study 1. As illustrated, each task is linked to a grouping, such as taxes, budgeting, and living frugally.

Table 4 shows the 20 tasks from Study 1 ranked by *importance*. Tasks related to living frugally and making appropriate financial decisions emerged as important factors in describing financial independence.

Table 5 provides a summary of the most *critical* tasks performed by those in Study 1 when the goal was wealth accumulation and financial independence. A criticality score was assigned to each task by averaging the scaled frequency and importance ratings for each task using the following formula:

$$\text{Criticality} = (((\text{Frequency} \times 7)/35) + ((\text{Importance} \times 5)/35))/2$$

Thus, criticality scores closer to 1 indicated that a task was critical and tasks closer to 0 indicated that a task was not critical. Similar to the ranking of tasks, actions related to living frugally, making good financial decisions, budgeting appropriately, and keeping a watchful eye on tax issues were found to be critically important.

3.2 | Study 2

Table 6 contains the task frequency ratings by participants in Study 2. This list includes the 20 financial tasks rated highest by participants. As was the case with Study 1, several overall task groups were represented in the top list of tasks, including financial decision making, taxes, and using credit and debt.

Table 7 compares the task categories across the two samples. Compared to the frequency ratings in Study 1, participants in Study 2 were more likely to view interpersonal type tasks (i.e., tasks from the *leading* [related to working with others] and *financial mentoring* task groups) as significant.

4 | DISCUSSION

The results from this study provide insights into the complexity and breadth of tasks associated with the HCFO job. Data showed that important tasks required by individuals managing their finances range from activities related to paying bills on time to demonstrating respect for a spouse's or partner's financial management skills.

TABLE 3 Task frequency ratings—Study 1

Task	Task group	N	Mean	SD
Complete and file tax returns on time (whether by self or with assistance).	Taxes	82	4.91	0.281
Pay bills on time to ensure no late fees or interest charges apply.	Financial decision making	70	4.91	0.282
Live (spend) below means (income/net worth).	Living frugally	66	4.85	0.472
Spend less on expenses than household's total income in a given period.	Living frugally	70	4.76	0.576
Create an emergency fund in budget.	Budgeting	68	4.75	0.632
Invest in employer-provided savings accounts (e.g., 401Ks).	Investing	70	4.74	0.695
Consider the outcomes of potential actions before deciding on a course of action.	Financial decision making	66	4.74	0.535
Understand the nature of investments and their likelihood of risk and return.	Investing	93	4.73	0.592
Make financial decisions based on household's budget, plans and long-term goals.	Financial decision making	69	4.71	0.597
Discuss unplanned or unexpected purchases with spouse/significant other prior to purchase.	Leading	59	4.68	0.571
Focus financial management efforts on becoming debt-free.	Planning	80	4.68	0.708
Understand the appropriate level of risk to take for own investment portfolio.	Investing	95	4.67	0.573
Budget enough money for basic needs (e.g., food) before budgeting for optional purchases (e.g., entertainment).	Budgeting	67	4.67	0.726
Pay credit card bills on time to ensure no interest charges are incurred.	Using credit/debt	66	4.67	0.997
Account for important household needs (e.g., food, clothing, shelter) in preparing budget.	Budgeting	66	4.64	0.835
Reach agreement on the roles that each spouse will play with regards to financial management and other household responsibilities.	Leading	59	4.63	0.667
Pay entire balance of credit card each month.	Using credit/debt	66	4.61	0.926
Maintain regular income to ensure resources are available for budget.	Generating revenue	68	4.59	0.851
Review bills and/or credit card statements thoroughly to ensure they are correct.	Monitoring	92	4.59	0.729
Focus more effort on becoming financially independent than on displaying social status via material goods.	Researching/practicing	82	4.56	0.787

The tasks identified in the study demonstrate the variety of activities that are required for someone to perform the HCFO job successfully. Results showed that there was an overlap between tasks reported frequently by the affluent sample and the sample of mass affluent HCFOs.

Of particular importance was the degree of agreement between the two samples. Those in the affluent sample indicated that the five most critical tasks needed to achieve and maintain wealth were to (a) live (spend) below means (income/net worth); (b) pay bills on time to ensure no late fees or interest charges apply; (c) spend less on expenses than household's total income in a given time period; (d) complete and file tax returns on time (whether by self or with assistance); and (e) create an emergency fund in budget. The non-affluent sample also reported paying bills on time and completing and filing

TABLE 4 Task importance ratings—Study 1

Task	Task group	*N*	Mean	*SD*
Live (spend) below means (income/net worth).	Living frugally	67	6.90	0.308
Spend less on expenses than household's total income in a given time period.	Living frugally	71	6.82	0.661
Make financial decisions based on household's budget, plans and long-term goals.	Financial decision making	71	6.79	0.411
Budget enough money for basic needs (e.g., food) before budgeting for optional purchases (e.g., entertainment).	Budgeting	68	6.78	0.452
Analyze budget and financial goals when considering a significant life change (e.g., changes to jobs, additional children, moving locations) that may impact goals.	Planning	94	6.78	0.467
Reduce spending as necessary when income decreases.	Budgeting	71	6.77	0.513
Pay bills on time to ensure no late fees or interest charges apply.	Financial decision making	71	6.76	0.462
Create an emergency fund in budget.	Budgeting	69	6.75	0.579
Discuss unplanned or unexpected purchases with spouse/significant other prior to purchase.	Leading	60	6.75	0.508
Devote time to building a strong relationship with spouse/significant other.	Leading	60	6.75	0.437
Consider the outcomes of potential actions before deciding on a course of action.	Financial decision making	67	6.75	0.472
Focus financial management efforts on becoming debt-free.	Planning	82	6.74	0.562
Reduce household budget as necessary when income decreases.	Budgeting	68	6.72	0.514
Understand the nature of investments and their likelihood of risk and return.	Investing	94	6.71	0.580
Assess current financial situation by examining budget, expenses and income.	Planning	94	6.70	0.504
Work with spouse/significant other as a team when managing household financial issues.	Leading	60	6.70	0.497
Understand the appropriate level of risk to take for own investment portfolio.	Investing	96	6.70	0.545
Create savings goals for retirement plans.	Planning	95	6.69	0.620
Pay entire balance of credit card each month.	Using credit/debt	66	6.67	0.810
Teach child(ren) about budgeting, saving and overall financial management.	Financial mentoring	72	6.67	0.769

taxes as being important; however, the other critical tasks were not mentioned in the top 20 task frequency ratings. This provides some insight into the behavioral differences between affluent and less affluent households. Rather than focus on financial planning tasks that involve making tradeoffs between needs and wants, those in the less affluent sample reported spending more time on interpersonal tasks and activities.

This research study also demonstrates the usefulness of a job analysis, a traditional method from industrial psychology, in the study of how individuals manage their household financial situation. This methodology treated the management of one's household finances as a traditional job, like a manager or a leader, in order to define the tasks associated with the job. The usefulness of a job analysis in organizational settings is "the discovery of the nature of the job" (Brannick & Levine, 2002, p. 8); this same discovery process illustrates that it is possible to identify tasks that are required of someone looking to succeed in the role of HCFO.

Additionally, the results from this research study provide a guide for individuals and those providing financial advice to HCFOs that can be used to conceptualize the frequency and importance of personal financial management tasks. Knowledge of the critical tasks associated with managing one's household finances can be used by HCFOs to prioritize their activities to ensure the most critical tasks are managed, divided up among household

TABLE 5 Critical tasks—Study 1

Task	Task group	Criticality rating
Live (spend) below means (income/net worth).	Living frugally	0.977
Pay bills on time to ensure no late fees or interest charges apply.	Financial decision making	0.974
Spend less on expenses than household's total income in a given time period.	Living frugally	0.963
Complete and file tax returns on time (whether by self or with assistance).	Taxes	0.961
Create an emergency fund in budget.	Budgeting	0.957
Consider the outcomes of potential actions before deciding on a course of action.	Financial decision making	0.956
Make financial decisions based on household's budget, plans and long-term goals.	Financial decision making	0.955
Understand the nature of investments and their likelihood of risk and return.	Investing	0.953
Budget enough money for basic needs (e.g., food) before budgeting for optional purchases (e.g., entertainment).	Budgeting	0.951
Discuss unplanned or unexpected purchases with spouse/significant other prior to purchase.	Leading	0.950
Invest in employer-provided savings accounts (e.g., 401Ks).	Investing	0.950
Focus financial management efforts on becoming debt-free.	Planning	0.949
Understand the appropriate level of risk to take for own investment portfolio.	Investing	0.946
Pay credit card bills on time to ensure no interest charges are incurred.	Using credit/debt	0.942
Pay entire balance of credit card each month.	Using credit/debt	0.937
Account for important household needs (e.g., food, clothing, shelter) in preparing budget.	Budgeting	0.936
Work with spouse/significant other as a team when managing household financial issues.	Leading	0.935
Analyze budget and financial goals when considering a significant life change (e.g., changes to jobs, additional children, moving locations) that may impact goals.	Planning	0.932

members, or outsourced as resources allow. HCFOs can also use this knowledge to allocate time appropriately to areas that are critical to success in the role.

Likewise, understanding the relative importance of tasks can better equip a financial advisor (e.g., financial planner or financial counselor) or financial educator when providing advice and counsel to clients about which household financial activities should be focused on by their clients. This knowledge can allow a financial professional to focus their advice on critical areas, versus attempting to provide an overly-complex and overreaching approach to financial advice.

4.1 | Future research

One noteworthy contribution of this study is the application of industrial-psychological methods to the domain of household financial management and financial planning. Future studies should expand this research by examining the effectiveness of various training, coaching, and development interventions that are designed to improve the way individuals complete tasks associated with financial management. Specifically, with respect to financial advisors, research should examine the relative effectiveness of financial planning, financial counseling, and financial coaching efforts on improvement in areas related to the psychological states proposed to be associated in the Hackman and Oldham (1976) job characteristics model, including feeling a sense of responsibility for the financial outcomes of one's household.

The current study provides a first step in understanding the nature of the HCFO job. Specifically, this article identified the critical tasks or activities of the role. The next step in a traditional job analysis involves the identification of psychological constructs or competencies that would serve as effective predictors of success in the job (Gatewood & Feild, 1999). Having identified the tasks that are deemed critical by subject matter experts and those efficient at transforming income into wealth, the next step involves clustering tasks into groups and formalizing the critical KSAOs that would help to identify those who would perform well in the HCFO role. While a set of critical tasks is useful for focusing individual

TABLE 6 Task frequency ratings—Sample 2

Task statement	Task group	N	Mean	SD
Pay bills (other than credit card bills) on time to ensure no late fees apply.	Financial decision making	157	4.68	0.633
Complete and file tax returns on time (whether by self or with assistance).	Taxes	156	4.63	0.859
Pay credit card bills on time to ensure no interest charges are incurred.	Using credit/debt	134	4.58	0.861
Discuss unplanned or unexpected purchases with spouse/significant other prior to purchase.	Leading	91	4.53	0.689
Devote time to building a strong relationship with spouse/significant other.	Leading	90	4.46	0.706
Budget enough money for basic needs (e.g., food) before budgeting for optional purchases (e.g., entertainment).	Budgeting	155	4.43	0.789
Ensure consensus/agreement is reached with spouse/significant other when managing household finances.	Leading	91	4.41	0.666
Maintain regular income to ensure resources are available for budget.	Generating revenue	156	4.40	0.760
Reach agreement on the roles that each spouse will play with regard to financial management and other household responsibilities.	Leading	91	4.40	0.801
Maintain a full-time job with a company (other than self-employed).	Generating revenue	138	4.38	1.083
Dispute inaccurate charges or hidden fees on bills when found.	Negotiating/disputing	157	4.37	0.894
Account for important household needs (e.g., food, clothing, shelter) before optional purchases in preparing budget.	Budgeting	157	4.31	0.822
Demonstrate respect for spouse/significant other with regards to his/her level of financial management skills.	Leading	90	4.30	0.841
Reduce spending as necessary when income decreases.	Budgeting	156	4.29	0.709
Take responsibility for financial concerns and issues within the family.	Leading	157	4.27	0.804
Ignore/refuse solicitations/advertisements on social media sites, via email, over the telephone, etc.	Negotiating/disputing	154	4.27	1.042
Research products and prices before purchasing items in stores or online.	Planning to shop	156	4.26	0.796
Review bills and/or credit card statements thoroughly to ensure they are correct.	Monitoring	154	4.26	0.913
Make financial decisions based on household's budget, plans and long-term goals.	Financial decision making	155	4.25	0.811
Follow regular maintenance schedule for car (e.g., rotating tires, changing oil, checking tire pressure).	Maintaining/organizing	140	4.23	0.787

household activities on specific areas, such a KSAO analysis will allow HCFOs, and those who provide financial advice to households, to assess, develop, and/or coach individual difference characteristics in order to improve opportunities for being successful in the role of HCFO. In this regard, Table 8 illustrates a proposed task by KSAO matrix that matches what is traditionally used to illustrate the critical individual differences characteristics that should be examined as part of a KSAO analysis.

A job analysis is also the first step in helping individuals and financial professionals scientifically differentiate recommendations designed to improve household financial outcomes from the myriad sources of personal finance information available in the marketplace. As the number of financial management resources grow, including books, blogs, and other resources, the academic literature that brings methodological rigor to understanding the tasks that lead to optimal household financial management outcomes is one way to help HCFOs weigh the relative merits of information. It would also be helpful if future research could focus on identifying critical tasks by stages of life, as some behaviors and tasks may be critical at different stages of one's life. Finally, additional research should address how individuals come to understand the major tasks and responsibilities of financial management, and how these may change over time. For example, several previous studies have cited the critical role parents play in financial socialization as compared to work experiences or educational experiences (Chiteji & Stafford, 1999; Shim, Barber, Card, Xiao, & Serido, 2010). This is an area that needs further empirical study.

4.2 | Limitations

There are some limitations associated with the current research study that need to be acknowledged. First, the affluent sample in Study 1 was based on a group of individuals who had a pre-determined interest in the topic of this study. Each was a data contributor to the work presented on *The Millionaire Next Door's* website. Those in the sample were not representative of the U.S. population. Furthermore, it is unclear if this group of individuals reported frequency and importance ratings based on their own behaviors and habits or because they were unduly influenced by the book or related books. This limitation is akin to the use of incumbent samples within an organization: it is rarely, if ever, the case that a group of incumbent SMEs have not been influenced by the training, management, or other coworkers with whom they have worked prior to being included in a study of their job. In the current study, we alleviated some of this concern by using a large sample of HCFOs across multiple households (essentially, multiple "organizations" are represented). Likewise, by including a sample of individuals from mTurk in Study 2, we were able confirm consistencies in the frequency ratings across the two samples. Regardless, this issue of endogeneity should be tested in future studies. Another limitation deals with the less affluent sample in Study 2. The sample did not provide importance ratings, thus the criticality score for the tasks could not be computed. Certain financial management tasks are more important depending on one's stage of life and net worth, including savings-related tasks (e.g., retirement, college savings, etc.) and investment-related tasks (see Grable, Kruger, & Fallaw, 2017). Future research should assess criticality within samples of various levels of wealth and various age groups to determine whether the criticality of certain tasks fluctuates depending upon someone's stage of life. Given the relatively homogeneous nature of the two samples, future research should attempt to recruit more representative samples (i.e., diversity in marital status, household size, geography, education, racial/ethnic background) when replicating the methodology employed in this study. Finally, in households with one financial decision maker, the responsibility for financial management is clear. The current study did not attempt to uncover the potential division of household financial responsibilities among couples. In households led by couples, responsibilities may be divided among each. Future research, particularly in the field of financial counseling with couples or spouses, should focus on how tasks are divided between or among individuals serving in a job-share model of the HCFO.

TABLE 7 Task categories represented in top 20 task lists by sample

Task category	Sample 1	Sample 2
Budgeting	9	3
Financial decision making	9	2
Investing	3	1
Leading	2	5
Using credit	2	1
Living frugally	2	—
Generating revenue	1	2
Taxes	1	1
Monitoring	1	1
Researching	1	—
Planning	1	—
Negotiating/disputing	—	3
Financial mentoring	—	1
Planning to shop	—	1
Maintaining/organizing	—	1

TABLE 8 Proposed task areas by knowledge, skills, abilities, and other characteristics (KSAO) matrix for the HCFO job

Task area	Financial literacy (knowledge)	Record-keeping (skill)	Complex problem solving (skill)	Mathematical reasoning (ability)	Deductive reasoning (ability)	Agreeableness (other characteristic—personality)	Conscientiousness (other characteristic—personality)
Planning		X			X		X
Financial responsibility		X					X
Problem-solving and decision making	X		X	X	X		
Working with others						X	

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ENDNOTES

[1] National Center for O*NET Development. *O*NET OnLine*. Retrieved April 16, 2013, from http://www.onetonline.org/.

[2] Note that some tasks in the initial list contained multiple parts, and were thus either combined with other tasks or separated into single tasks.

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APPENDIX: TASKS INCLUDED IN THE TASK ANALYSIS FOR THE HCFO JOB

Task #	Task	Grouping
213	Account for important household needs (e.g., food, clothing, shelter) in preparing budget.	Budgeting
201	Anticipate large, infrequent expenses (e.g., the purchase of a car) when creating a budget.	Budgeting
239	Budget enough money for basic needs (e.g., food) before budgeting for optional purchases (e.g., entertainment).	Budgeting
231	Consider the cost versus benefits of spending money on unexpected/unbudgeted items.	Budgeting
191	Create a budget to manage household finances.	Budgeting
230	Create an emergency fund in budget.	Budgeting
243	Do not spend more money than is budgeted for an item or category.	Budgeting
240	Operate household using a budget.	Budgeting
241	Reduce household budget as necessary when income decreases.	Budgeting
207	Reduce spending as necessary when income decreases.	Budgeting
246	Track income and spending for a given time period (e.g., monthly).	Budgeting
180	Work with family members to create realistic budget.	Budgeting
217	Continue to donate money to charitable organizations despite decreases in income.	Donating
206	Donate household items to charitable organizations.	Donating
190	Donate portion of income to charitable organizations.	Donating
221	Donate time and energy to charitable organizations.	Donating
182	Encourage other household members to donate to charitable organizations.	Donating
202	Review information regarding charitable organizations before donating cash or items to them.	Donating
224	Consider the outcomes of potential actions before deciding on a course of action.	Financial decision making
189	Delay making important financial decisions.	Financial decision making
203	Evaluate investment opportunities from friends and relatives carefully.	Financial decision making
9	Evaluate risks and returns of investment opportunities thoroughly before investing.	Financial decision making
204	Make financial decisions based on household's budget, plans and long-term goals.	Financial decision making
200	Manage financial problems (e.g., unplanned medical expenses, disasters) calmly.	Financial decision making
195	Pay bills on time to ensure no late fees or interest charges apply.	Financial decision making
248	Seek out and use financial advice only from those with substantial financial expertise, knowledge and/or experience.	Financial decision making
163	Decline requests from adult children to subsidize/support adult children's lifestyle.	Financial mentoring
249	Demonstrate respect for spouse/significant other with regards to his/her financial management skills.	Financial mentoring
172	Disclose financial information of family (e.g., parents' income level) to children.	Financial mentoring
252	Maintain separate accounts (e.g., checking, savings, credit cards) from spouse/significant other.	Financial mentoring
170	Pay children to complete household chores.	Financial mentoring
184	Praise family members for frugal behavior.	Financial mentoring
186	Praise family members for saving.	Financial mentoring
183	Provide advice and mentoring on good spending habits to family members.	Financial mentoring
179	Provide advice and mentoring on how to save money to family members.	Financial mentoring
165	Provide children with allowance.	Financial mentoring
167	Provide children with incentives for saving money (e.g., matching interest).	Financial mentoring
159	Provide substantial money, gifts, and/or other purchases to adult children.	Financial mentoring

(Continues)

Task #	Task	Grouping
169	Require children to pay for non-holiday or non-gift items (i.e., outside of holidays and birthdays).	Financial mentoring
175	Require children to pay for/fund part or all of higher education expenses.	Financial mentoring
160	Require children to pay for/fund part or all of transportation expenses (e.g., a car).	Financial mentoring
171	Teach child(ren) about budgeting, saving and overall financial management.	Financial mentoring
238	Assess own competencies and skills as compared to those required for particular jobs when considering career opportunities.	Generating revenue
220	Choose job and/or career that maximizes own abilities, skills, and knowledge.	Generating revenue
162	Create and work for own business to generate income.	Generating revenue
236	Create or choose business opportunities that are successful.	Generating revenue
214	Evaluate career path to ensure match between competencies and job requirements.	Generating revenue
234	Find new sources of income (e.g., job, starting new business) in the event of job loss or other unforeseen declines in income.	Generating revenue
152	Look and apply for job promotions within current or other organizations.	Generating revenue
164	Look for ways to generate income outside of primary job.	Generating revenue
153	Maintain a full-time job with a company (other than self-employed).	Generating revenue
226	Maintain regular income to ensure resources are available for budget.	Generating revenue
154	Meet or exceed expectations and goals in current job.	Generating revenue
158	Receive promotions in current job, or changes jobs to secure promotions.	Generating revenue
155	Seek ways to increase income in current job (e.g., by asking for raise, exceeding quota in sales).	Generating revenue
228	Sell art, coins, stamps, and/or other high value items as a means to generate income.	Generating revenue
194	Sell household items (e.g., via eBay, craigslist.com, and/or garage sales) to generate revenue.	Generating revenue
157	Work for multiple companies simultaneously (outside of consulting or contracting).	Generating revenue
211	Buy and collect art, antiques, coins, jewelry, and/or other high-value collectibles.	Investing
4	Buy and sell individual stocks, mutual funds as part of an overall investment strategy.	Investing
34	Choose an investment strategy that considers age and time before needing income from investments.	Investing
1	Choose investments that have the highest possible returns.	Investing
218	Collect art, coins, stamps, and/or other high value items as a hobby.	Investing
208	Collect lower value or lower-priced items as a hobby.	Investing
43	Convert investments to cash when market declines significantly.	Investing
27	Engage in "day trading," or buying and selling stocks, mutual funds, and other investments quickly in a short period of time.	Investing
40	Ensure investments are diversified across various types of investments.	Investing
33	Examine the balance sheet of a company before investing in the company.	Investing
14	Fund retirement accounts before funding other specific savings accounts (e.g., college savings accounts).	Investing
44	Invest in conservative, stable investments (i.e., avoids sharp increases and declines).	Investing
161	Invest in employer-provided savings accounts (e.g., 401Ks).	Investing
39	Invest in high-risk investments (e.g., penny stocks, junk bonds).	Investing
31	Make the most efficient allocation of own assets to minimize tax effects.	Investing
38	Move cash on hand to higher interest-earning savings accounts to improve returns.	Investing
17	Open new investment accounts; close old accounts.	Investing
35	Purchase and hold real estate (land, homes, or other properties) as part of an overall investment strategy.	Investing

Task #	Task	Grouping
23	Purchase and manage rental and/or vacation homes or condominiums to generate income.	Investing
6	Purchase partial ownership in real estate (e.g., timeshares) as an investment.	Investing
8	Purchase savings bonds.	Investing
18	Purchase stocks or other investments on margin.	Investing
16	Research unusual/unconventional ways to invest money.	Investing
19	Subscribe to fee-based resources for investment advice and information (e.g., Morningstar).	Investing
15	Take above average financial risks when investing.	Investing
2	Take average financial risks when investing.	Investing
24	Take few, if any, risks when investing.	Investing
13	Take substantial financial risks when investing.	Investing
3	Trade in commodities as part of investment strategy.	Investing
41	Trade in futures and/or options as part of investment strategy.	Investing
5	Transfer assets from one investment, savings account to another.	Investing
12	Understand the appropriate level of risk to take for own investment portfolio.	Investing
26	Understand the nature of investments and their likelihood of risk and return.	Investing
11	Use discount brokerage firm(s).	Investing
254	Devote time to building a strong relationship with spouse/significant other.	Leading
251	Discuss negative aspects of marriage/relationship with those outside the marriage/ relationship.	Leading
250	Discuss unplanned or unexpected purchases with spouse/significant other prior to purchase.	Leading
176	Encourage and reward effective communication and cooperation within the family.	Leading
185	Encourage family members to use skills and strategies for confronting problems in a constructive manner.	Leading
256	Ensure consensus/agreement is reached with spouse/significant other when creating budget.	Leading
255	Give spouse/significant gifts when disagreements occur.	Leading
259	Meet with spouse regularly to discuss household budget and other financial matters.	Leading
178	Provide advice and mentoring to family members.	Leading
258	Reach agreement on the roles that each spouse will play with regards to financial management and other household responsibilities.	Leading
181	Serve as a leader in the family.	Leading
177	Take responsibility for financial concerns and issues within the family.	Leading
257	Work with spouse/significant other as a team when managing household financial issues.	Leading
253	Work with spouse/significant other to reach agreement on changes to budget and/or long-term financial plans.	Leading
247	Enter receipts into financial management software and/or system (e.g., Quicken) to track spending.	Leveraging technology
235	Maintain accurate records of income and spending.	Leveraging technology
196	Use programs like turbo tax to complete personal tax returns.	Leveraging technology
232	Use software or cloud-based programs to create personal financial forecasts.	Leveraging technology
233	Use technology (e.g., apps, investor tools) to assist in managing investments.	Leveraging technology
245	Use technology (e.g., apps, online tracking tools) to monitor purchases and budgeting.	Leveraging technology
193	Use technology to assist in managing budget and personal finances.	Leveraging technology
141	Apply for rebates on purchased items when available.	Living frugally
215	Borrow larger, infrequently used appliances/tools/machinery from neighbors, friends, family instead of purchasing them.	Living frugally
89	Drive at steady rate on highways to use less gasoline per mile.	Living frugally

(Continues)

Task #	Task	Grouping
219	Have furniture reupholstered/refinished before buying new furniture.	Living frugally
237	Have shoes and/or clothes repaired/altered before buying new items.	Living frugally
223	Live (spend) below means (income/net worth).	Living frugally
198	Look for and use methods to decrease energy, water consumption at home.	Living frugally
210	Make/give homemade gifts versus purchasing gifts.	Living frugally
188	Participate in lotteries or gambling.	Living frugally
229	Practice stockpiling non-perishable food items and other household essentials when on sale (e.g., laundry detergent, dishwashing detergent).	Living frugally
212	Prepare and/or consume homemade meals for dinner.	Living frugally
187	Prepare and/or consume homemade meals for lunch.	Living frugally
192	Raise thermostat setting on air conditioner during summer/daytime.	Living frugally
197	Spend less on expenses than household's total income in a given time period.	Living frugally
216	Trade/barter items or services with friends, neighbors, and relatives.	Living frugally
205	Use coupon services to find inexpensive activities, vacations, and other entertainment (e.g., Groupon).	Living frugally
222	Collect luxury items.	Luxury living
69	Describe the luxury items of others in a positive manner.	Luxury living
242	Purchase and/or drive luxury brand automobiles.	Luxury living
225	Purchase and/or wear designer clothes.	Luxury living
227	Purchase and/or wear designer watches.	Luxury living
53	Purchase luxury items.	Luxury living
58	Use material possessions to display social status.	Luxury living
244	Work to improve status among friends/neighbors in terms of the types of material goods owned (e.g., cars, electronic equipment, clothing, and accessories).	Luxury living
60	Clean/organize home by self or with help from other family members.	Maintaining assets
147	Complete lawn care maintenance/yard work on own or with help from family members.	Maintaining assets
146	Complete own minor home repairs when needed.	Maintaining assets
148	Engage in "do-it-yourself" projects to maintain or build equity in home.	Maintaining assets
90	Follow regular maintenance schedule for car (e.g., rotating tires, changing oil, checking tire pressure).	Maintaining assets
37	Monitor investments frequently by checking stock tickers (e.g., via smart mobile devices).	Monitoring
21	Monitor investments periodically to evaluate their performance.	Monitoring
76	Review accounts that have automatic drafts to ensure charges are correct.	Monitoring
68	Review bills and/or credit card statements thoroughly to ensure they are correct.	Monitoring
85	Review contracts and bills to find inaccurate charges.	Monitoring
156	Review paycheck stubs (paper or electronic) to ensure proper payment from employer.	Monitoring
22	Review statements from any investments owned to review returns/performance of such investments.	Monitoring
65	Ask for discounts on purchases when appropriate.	Negotiating/disputing
79	Dispute charges or hidden fees on bills when found.	Negotiating/disputing
47	Ignore/refuse solicitations via telephone.	Negotiating/disputing
80	Negotiate prices for services (e.g., remodeling work, lawn care).	Negotiating/disputing
87	Negotiate purchase and/or lease price of cars.	Negotiating/disputing
59	Negotiate purchase price of items at traditional stores (i.e., stores where negotiating is uncommon).	Negotiating/disputing
75	Negotiate purchase price of items that have slight defects with sales staff by addressing flaws.	Negotiating/disputing

Task #	Task	Grouping
143	Refuse initial asking price for any home.	Negotiating/disputing
62	Create and update inventory of household supplies to ensure adequate supplies are available.	Organizing
74	Organize/declutter home in order to determine products already owned.	Organizing
61	Actively seek ways to secure gifts from extended family members by ingratiating self.	Reliance on others
52	Ask extended family members for loans and/or gifts to cover expenses.	Reliance on others
70	Ask extended family members to fund large expenses (e.g., education, vacations, expensive clothing).	Reliance on others
67	Make own financial decisions based on the wealth of extended family members.	Reliance on others
45	Manage finances of extended family members (e.g., in-laws, parents) in order to determine potential available funds for own use.	Reliance on others
83	Rely on substantial money, gifts, and/or other purchases from parents, in-laws, or other extended family members to maintain lifestyle.	Reliance on others
10	Consult with a trusted advisor regarding financial planning (e.g., a financial planner, attorney/estate planner, accountant).	Outsourcing
29	Maintain control of investments (i.e., instead of outsourcing investing to others).	Outsourcing
166	Outsource childcare to day care or babysitter/nanny.	Outsourcing
63	Outsource home cleaning to maid/cleaning service.	Outsourcing
64	Outsource lawn care to lawn maintenance company or contractor.	Outsourcing
50	Use recommendations and research to find effective and dependable professionals for outsourced needs (e.g., attorneys, accountants).	Outsourcing
54	Work with accountant to file state and federal tax returns (if applicable).	Outsourcing
71	Work with attorney and/or estate planning professional to create will.	Outsourcing
7	Work with financial advisor to plan and invest savings.	Outsourcing
77	Analyze budget and financial goals when considering a significant life change (e.g., changes to jobs, additional children, moving locations) that may impact goals.	Planning
81	Assess current financial situation by examining budget, expenses, and income.	Planning
78	Create overall financial goals for household.	Planning
168	Create savings goals for college savings accounts.	Planning
66	Create savings goals for larger purchases (e.g., down payment on house).	Planning
56	Create savings goals for retirement plans.	Planning
73	Create will to distribute wealth and/or material goods in the event of a catastrophe (either on own or with an attorney).	Planning
82	Create written financial plan for self or household including goals, current income, expected income, net worth and long-term investing plans.	Planning
84	Determine net worth of household.	Planning
49	Develop and follow an overall financial plan to reach personal financial goals.	Planning
48	Ensure long-term financial plans account for uncertainty.	Planning
131	Focus financial management efforts on becoming debt-free.	Planning
72	Invest in life insurance to provide for others in the event of an unforeseen accident.	Planning
46	Review financial plan regularly to determine whether life changes, economic changes, environmental concerns, or financial performance indicate a need to alter plan.	Planning
103	Allocate time, energy, and money efficiently, in ways that lead to building wealth.	Researching/practicing
42	Evaluate and compare the relative quality of various investments before investing.	Researching/practicing
110	Focus more effort on becoming financially independent than on displaying social status via material goods.	Researching/practicing
57	Manage finances/accounts for extended family members.	Researching/practicing

(Continues)

Task #	Task	Grouping
109	Participate in investing clubs, groups, or workshops.	Researching/practicing
55	Read financial magazines, newspapers, blogs, and other publications for advice on managing finances.	Researching/practicing
28	Research and understands the financial status of a company before purchasing stock.	Researching/practicing
134	Research schools, property taxes and other related criteria before purchasing home.	Researching/practicing
51	Seek out financial advice via well-respected financial publications.	Researching/practicing
140	Continue to save at same rate despite changes in household income.	Saving
116	Save approximately 1% of monthly household income (pre-tax) each month.	Saving
123	Save approximately 10% of monthly household income (pre-tax) each month.	Saving
209	Save approximately 15% of monthly household income (pre-tax) each month.	Saving
106	Save approximately 20% of monthly household income (pre-tax) each month.	Saving
86	Save approximately 25% or more of monthly household income (pre-tax) each month.	Saving
199	Save approximately 5% of monthly household income (pre-tax) each month.	Saving
112	Switch utilities and/or services in order to save money (e.g., switching cable/internet services; natural gas).	Saving
105	Leave store as soon as intended purchase is made.	Shopping
100	Purchase appliances and/or automobiles that are top rated by trusted publications.	Shopping
113	Buy clothing, food and other commonly used items using coupons and/or other discounts.	Spending
101	Consult budget to determine amount available for shopping prior to purchasing items.	Spending
139	Consult social media or other websites for product recommendations before making purchases.	Spending
124	Consult trusted advisors (e.g., friends, family, co-workers) before making large purchases.	Spending
125	Create shopping lists to dictate purchases at stores.	Spending
173	Decline requests from children and/or other family members for non-budgeted or unplanned purchases when shopping.	Spending
122	Evaluate purchase prices of items to determine if they meet budget.	Spending
104	Exceed budgeted amount for spending when shopping.	Spending
107	Go on "shopping sprees" when new items are needed.	Spending
128	Learn and use the sales cycles at favorite stores to save money on seasonal and other items.	Spending
117	Purchase clothing and/or household items at thrift stores, dollar stores, consignment sales and/or garage sales.	Spending
132	Purchase entertainment, travel, or other leisure activities only when they are discounted.	Spending
119	Purchase food and clothing on sale or at discount stores.	Spending
111	Purchase generic or store brand versions of products.	Spending
102	Purchase household items in bulk (e.g., at Costco or Sam's club).	Spending
99	Purchase items on impulse when shopping.	Spending
121	Purchase new wardrobe of clothing before each season (i.e., spring, summer, winter, fall).	Spending
115	Purchase only items on shopping list when in store or online.	Spending
133	Purchase quality clothing that will last for several seasons of wear.	Spending
130	Purchase quality furniture and other household items that will hold their value.	Spending
98	Purchase quality shoes and/or other personal accessories that will hold their value.	Spending
135	Research products and prices before purchasing items in stores or online.	Spending
126	Spend money with the expectation of higher, future income levels.	Spending
120	Spend money with the expectation of receiving gifts of cash and/or inheritance in the future.	Spending
138	Understand and avoid marketing tactics in stores.	Spending

Task #	Task	Grouping
137	Use loyalty or other customer programs to receive coupons and credits.	Spending
127	Complete and file tax returns on time (whether by self or with assistance).	Taxes
36	Create plans to minimize tax impact on investment income (e.g., holding fixed income investments in tax-advantaged accounts).	Taxes
30	Harvest investment losses where available to minimize taxes.	Taxes
20	Maximize contributions to 401K, 401B or other tax-deferred retirement account(s).	Taxes
174	Utilize 529 accounts and other tax-advantaged accounts to save for education (for own children or children of family/friends).	Taxes
114	Utilize FSA, HSA, and/or other tax-advantaged benefits accounts.	Taxes
25	Withdraw money from tax-advantaged accounts (e.g., a 401K) to pay for routine purchases.	Taxes
32	Withdraw money from tax-advantaged accounts (e.g., a 401K) to pay for large purchases.	Taxes
118	Borrow money from extended family members for large purchases.	Using credit/debt
108	Borrow money from friends to pay for large purchases.	Using credit/debt
95	Carry balance on one or more credit cards.	Using credit/debt
129	Consolidate debts to save interest and have a smaller overall payment.	Using credit/debt
151	Increase mortgage payments to decrease time of loan and overall interest payments.	Using credit/debt
97	Pay credit card bills on time to ensure no interest charges are incurred.	Using credit/debt
92	Pay entire balance of credit card each month.	Using credit/debt
136	Pay for large purchases with cash.	Using credit/debt
142	Pay off home mortgage early to reduce interest costs.	Using credit/debt
88	Purchase automobile using credit that requires maintaining current income level.	Using credit/debt
150	Purchase home that requires multiple loans (either from financial institution or friends/relatives) to afford it.	Using credit/debt
145	Purchase home with monthly mortgage that requires maintaining current income level (or higher) in order to pay mortgage.	Using credit/debt
144	Refinance home loan to decrease interest rate.	Using credit/debt
149	Take out loans to pay for home improvements.	Using credit/debt
91	Take out loans to pay for personal vehicles.	Using credit/debt
96	Use credit or debit card to assist in tracking spending.	Using credit/debt
94	Use multiple credit cards to generate rewards and discounts.	Using credit/debt
93	Use only one rewards credit card in order to accumulate substantive rewards.	Using credit/debt

Our Changing Marketplace

Alternative Investments – Looking Beyond Traditional

Solvency Margin for Insurance Companies

Think Ahead: Post-COVID Retirement Planning

Alternative Investments - Looking Beyond Traditional

By Niti Guhathakur, CFP^{CM}

Over the years, the range of investment products available to the public has increased substantially. While equities and bonds remain traditional options, you should also know about the growing number of alternatives that are available.

Getting to know alternative investments

Alternative investments, also known as "alternatives," is a broad term that is generally understood to be an investment product other than traditional investments like shares or bonds. Alternative investments mainly include private equity, venture capital, hedge funds, structured products, real estate, gold, currency funds, wine, art or collectibles.

Alternative investments versus traditional investments

Alternative investments differ from traditional investments in terms of their low correlation with traditional asset classes, their compatibility with multidimensional trading strategies and the sheer range of instruments to choose from. They can be attractive because of their potential to create returns in excess of traditional investments, though they are relatively complex and sometimes illiquid in nature.

Benefits and risks associated with alternative investments

As alternative investments tend to behave differently as compared to traditional investments. Including them in your portfolio can provide broader diversification, enhanced returns and increased income levels. Investing in alternatives can also be a great way to diversify a portfolio.

But there are many things to consider before investing in alternatives. Higher returns typically come with higher risks, as is the case with alternative investments. Consequently, if you are considering alternative investments, it is very important that you conduct thorough due diligence to determine which investments are right for you.

The truth is that there will always be risks associated with investing, which is why it's important that you conduct your own risk analysis and invest in accordance with your risk profile. For instance, below are just a few important questions for you to consider as you gauge your appetite for alternatives:

- Is this a liquid investment, where I can easily sell my position?
- Would I be permitted to withdraw my funds should I need them?
- Are there recurring fees; and if so, can I afford them?

This list is by no means exhaustive. But it should help you begin thinking about whether alternative investments are right for your portfolio and investment objectives.

How to realize returns through alternative investments

Next, you should know the ways in which you can generate returns through alternative investments.

- **Cash-on-cash return -** This is the rate of return in real estate transactions that calculates the cash income you earned relative to the cash you invested in a property.
- **Growth -** Some investments may not generate income on periodic intervals. Instead, they have the potential to appreciate in price over time. For example, investments in gold coins, wines or art might fall into this category.
- **Balanced investment -** This approach aims to seek a balance between income and growth. For example, you might purchase a warehouse or property that generates rental income and grows in value over time.

Alternative investments for diversification

Over the years, I have seen clients allocate anywhere from 3% to 30% of their portfolio to alternative investments. Options are a common starting point for investing in alternatives.

It is a common misconception that alternative investments are only for large institutional investors or that they are too complicated for the average investor to comprehend. Recent regulatory changes have made this universe of investments open to a much larger audience, and I tend to think that the benefits outweigh the risk. Unlike traditional investments, each alternative investment has a different risk profile, exchange, regulatory framework and more.

Let's take a look at some of them.

Digital gold: An alternative to physical gold, digital gold currency (DGC) is a type of "electronic currency" based on mass units of gold. What makes this a good investment option? Digital gold doesn't have high storage or maintenance costs. Unlike physical gold, it is electronically secured and there's an active market for buying and selling. There are a number schemes that have been introduced by Indian companies that allow you to invest in gold with a minimum investment of Rs. 500.

Commodities: Commodities are physical assets used to create products like spices, metals, cotton, coffee and more. Investors can buy and sell commodities directly on the commodities exchange or via derivatives such as futures and options. Commodities can provide a hedge against inflation—as the demand for commodities increases, the price will increase too. The real benefit is that they provide a source of returns that is uniquely different from traditional stocks or bonds.

Diamonds: The word diamond derives from the Greek word "adamas," which means invincible or indestructible. Diamonds are quite expensive for most people. But with the introduction of Diamond SIPs (staggered investment plans) by ICEX (Indian Commodity Exchange Limited), it is now a lot easier to invest in this precious stone.

Wine: While many people consider buying wine and aging it for future consumption, very few people view wine strictly as a financial investment. In fact, there are several disadvantages: there is no dividend payment in wine investing, investors pay for its storage and realizing a return on your investment can take 15 to 30 years. However, it can also be said that investment-grade wine, on average, provides positive returns and benefits from low exposure to market risk factors—therefore, providing a very unique form of diversification for your investment portfolio.

Alternative Investment Funds: Alternative Investment Funds (AIFs) are funds of privately pooled investments from sophisticated investors, whether Indian or foreign. These funds invest in alternatives like real estate, private equity, venture capital and intellectual property.

Art and collectibles: Investing in art and collectibles can be a rewarding undertaking. Experts in this domain often study and invest directly in certain types of art or rare objects, while others could invest in them through investment funds. The key reasons for investing in art, in particular, are the potential for financial gains and the "psychic return," which is a term coined by economists that refers to the benefits of investing in something that can be both experienced and enjoyed.

Real estate: Because real estate is something you can see and touch, some investors find it more attractive than stocks and bonds. The main purpose of investing in real estate is the stream of rental income and potential for price appreciation that it provides. Real estate holdings can also help diversity your portfolio.

Hedge funds: This is the most popular alternative investment among institutional investors and high net worth individuals. A hedge fund is an investment vehicle whereby sophisticated investors pool their funds and entrust a hedge fund manager to leverage their expertise to invest in a wide range of asset classes using a variety of strategies. One of the primary reasons for including them in your portfolio is because of the diversification and returns they can provide.

Private equity (PE): Private equity can be debt or equity securities that are not publicly traded. Private equity investments include venture capital, leverage buyouts, mezzanine debt and distressed debt. Private equity firms serve as the general partner (GP) while institutional investors and high net worth individuals provide the bulk of capital as limited partners (LP). There are two main characteristics of private equity as compared to public equity: 1) there is no liquid, secondary market and 2) they have very restricted disclosure policies. The partnership is expected to last for five to 10 years; and the partnership agreement signed at the fund's inception clearly defines the expected payments to GPs. The success of PE firms is dictated by their ability to stay in business and to raise funds every three to five years.

To conclude, as with any investment, one must consider the unique risks and rewards associated with the various investment options available. You also have to conduct extensive due diligence before you make a decision. But if you are willing to take these necessary steps, you may find that alternatives can help you realize your investment objectives by reducing your exposure to certain market risk factors and providing your investment portfolio with the necessary level of diversification.

Niti Guhathakur is a CFP certificant and a SEBI Registered Investment Advisor. She is the founder of Assetpie.com which is "a financial marketplace, tailored for everyone."

Solvency Margin for Insurance Companies

By Joydeep Sen, CFP^CM

It’s not uncommon for clients to question the dependability of their financial institution. Doubts can arise particularly when there is an adverse event or negative press. Recently, in India, one cooperative bank went bust, a leading private sector bank was bailed out, few non-banking finance companies (NBFCs) closed and there were negative reports about two insurance companies.

Given the concerns in the marketplace, we should have a firm understanding of the solvency ratio of insurance companies, which shows the capacity of an insurance provider to service claims.

For starters, solvency margin is the margin of assets over liabilities. But I should point out that it is the margin and not assets divided by liabilities. Assets of an insurance company are fixed, investible assets, as defined by the Insurance Regulatory and Development Authority of India (IRDAI).

Meanwhile, liabilities are future pay outs (e.g. claims, maturity benefits, etc.) But liabilities are not the aggregate amount of coverage given. Instead, they represent the estimate of claims and expenses as calculated by an actuary. For life insurance business in India, the solvency margin required is 150% or 1.5 times. But this does not mean having assets 1.5 times the estimated liability. It is the ratio of the actual solvency margin (ASM) to the required solvency margin (RSM).

IRDAI, established in 1999, is the supervisory authority for insurance companies in India. IRDAI was established to protect the interest of the general public, and to promote free competition and the marketability of insurance products. For each product class, depending upon the inherent risk of the product, IRDAI has prescribed the required solvency margin (RSM).

Let's say an insurance company has a liability of 100 and a required solvency margin (RSM) of 10, as prescribed by IRDAI. This means assets have to be worth at least 110. However, the requirement is more stringent. IRDAI prescribes a solvency ratio of 150%, which means the insurance company need to maintain 115 instead of 110. Instead of having an excess of 10 over liabilities, it should be 1.5 times of 10 in this example.

To paraphrase, solvency margin is the minimum excess on an insurer's assets over its liabilities as per regulations. It is similar to capital adequacy requirements for banks. The difference with banks, however, is the ratio of the amount of capital to risk-weighted assets. In insurance, it is the excess of assets over estimated liabilities.

Now let us look at some aspects of valuation for solvency ratio.

Valuation of assets and liabilities: Assets shall be valued at values not exceeding their market or realizable value and the assets hereafter mentioned shall be excluded to the extent indicated, namely:

a. agents' balances and outstanding premiums in India, to the extent they are not realized within a period of 30 days
b. agents' balances and outstanding premium outside India, to the extent they are not realizable
c. miscellaneous debts, to the extent they are not realizable
d. advances of an unrealizable character
e. furniture, fixtures, dead stock and stationery
f. deferred expenses
g. profit and loss appropriation account balances, and any fictitious assets other than pre-paid expenses

h. such other asset or assets as may be specified by the regulations made in this behalf.

Liabilities: a proper value shall be placed on every item of liability and liabilities in respect of share capital, general reserve and other reserves of similar nature not created to meet specific liabilities and investment reserve, reserve for bad and doubtful debts, and depreciation fund shall be excluded and liabilities hereafter mentioned shall be included to the extent indicated, namely:

a. provision for dividends declared or recommended, and outstanding dividends in full
b. reserves for unexpired risks related to:
   i. fire and miscellaneous business, 50%
   ii. marine cargo business, 50%
   iii. marine full business, 100% of the premium, net of re-insurances, during the preceding 12 months
c. estimated liabilities related to outstanding claims, in full
d. amount due to the insurance companies carrying on insurance business, in full
e. amounts due to miscellaneous creditors, in full
f. provision for taxation, in full
g. such other liability that may be made in this behalf to be included for the purpose of clause (ii).

Sufficiency of assets: Every insurer and re-insurer must maintain an excess of value of assets over amount of liabilities of, not less than 50% of amount of minimum capital as stated under Section 6 and arrived at in the manner specified by regulations. The requirement is little different for general insurance business.

An insurer that does not comply with the provisions mentioned above shall be deemed to be insolvent and may be wound up by the court. If, at any time, an insurer does not maintain the required solvency margin (e.g. 150% solvency at all times) in accordance with the provisions of this section, it shall, in accordance with the directions issued by the authority, submit a financial plan, indicating a plan of action to correct the deficiency to the authority within a specified period not exceeding three months.

In case the solvency margin fails, there are other safeguards from the policyholders' point of view. For instance, Section 52A of the Insurance Act of 1938 empowers regulators to appoint an administrator for a life insurer if it feels that it is acting in a manner that is prejudicial to the interests of policyholders. Under Section 52B, this administrator can transfer the business to another insurer or recommend winding up of the business.

Sample computation of Solvency Ratio

(₹ '000)

Item No.	Description	Notes No...	Adjusted Value
(1)	(2)	(3)	(4)
01	Available Assets in Policyholders' Fund	-	1,549,934,697
	Deduct:		
02	Mathematical Reserves	-	1,527,289,162
03	Other Liabilities	-	11,834,968
04	**Excess in Policyholders' funds(01-02-03)**	-	**10,810,567**
05	Available Assets in Shareholders Fund:	-	79,926,715
	Deduct:		
06	Other Liabilities of shareholders' fund	-	13,471,123
07	**Excess in Shareholders' funds(05-06)**	-	**66,455,592**
08	Total ASM (04) + (07)	-	77,266,159
09	Total RSM	-	35,658,508
10	Solvency Ratio (ASM / RSM)	-	**216.68%**

Reasons for Changes in Solvency Ratios

Impact of regulatory changes: It has been observed that in the past, on account of regulatory changes, the solvency ratio of general insurers has been significantly impacted. For instance, in March 2011, IRDAI required all non-life insurers – including reinsurance companies – to provide for liability of Motor TP (third party) pool at 153% between fiscals 2007-2008 and 2010-2011. This resulted in a sharp decline in the solvency ratio of non-life insurers. Subsequently, IRDAI relaxed the solvency ratio to below 1.5 times for the years ending March 31, 2012, to March 31, 2014, in order to enable the insurers to absorb the impact of higher reserve requirements.

Increase in claims: Substantial increases in claims due to aggressive underwriting practices, geographical concentration, and higher exposure to riskier segments can impact the solvency ratio. While the reserve requirement increases, assets available for calculation decline as claims rise, resulting in a deterioration of the solvency ratio.

Business growth: Business growth leading to significant increase in premiums can also impact the solvency ratio of insurers. The required solvency margins and reserve requirements increase on account of high premium growth leading to a decline in the solvency ratio.

Conclusion

The regulator is keeping a watch on the fundamentals of insurance companies. For your part, whenever you are recommending an insurance company to your client, you may want to look at the solvency margin. It may not be a one-to-one comparison because the company may be underutilizing its capital. But apart from these small details, when you have a doubt or there is negative press, you may want to look at solvency ratios as a reference point.

Joydeep Sen is a trainer, academician and columnist. He has authored four books, including one on fixed income, one on mutual funds and one on wealth management.

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Think Ahead, Post-Covid 19 Retirement Planning

FINANCIAL PLANNING Association Of Singapore

Ms Kee Siew Poh, CFP®

Most people would need average 70% of their pre-retirement income to live comfortably for retirement, but many do not have that much saved away, and Covid-19 is about to make it worse. According to a survey done by OCBC, 2 in 3 Singaporeans and PRs do not even have sufficient savings to maintain their current lifestyle beyond 6 months if they were to lose their jobs now. This being the case, would Covid-19 ruin their plans for retirement? A crisis as sudden and pervasive as this is bound to cause one to be concerned or worried.

How Covid-19 is affecting retirement

1. Delay in retirement
    - From the same OCBC survey, many who have either decreased or stopped setting aside funds for retirement. This would inevitably result in

a delay in their retirement. This delay is further compounded with the withdrawal of retirement savings to pay for current living expenses due to job loss.

2. Earlier than expected retirement

   - Unemployment may force an earlier than expected retirement for some, especially those in the 50s. Second career may be hard to come by in the pandemic economy with greater employment vulnerability.
   - In addition, because of the pre-mature unemployment, loss of medical benefits through the corporate plan happens sooner than expected. Additional premium or budget may need to be set aside to take care of one's medical plan. In event of pre-existing health conditions, new application is not likely to cover pre-existing conditions which could possibly be covered under corporate scheme.

Useful lessons & Insights from Covid-19

1. Plan early for retirement
   - Millennials need to future-proof themselves by planning early for retirement
   - This means to start early, save more, invest more to enjoy the benefits of starting early and letting time and the power of compounding to work its magic
   - Younger investors also time on their side and hence a wider margin for making errors

2. Cut back on expenses & invest additional savings

   - The Covid-19 pandemic has not affected all occupations equally. While many employed in retail, food and beverage, hospitality, aviation had lost their jobs or suffered pay cut, those employed in the healthcare, education, finance, government & IT have been relatively unaffected.
   - The lockdown and WFH (work from home) can be a boon as it enables us to easily cut back on shopping, eating out, everyday commute and overseas travel. For those who do have any pay cut, this should

translate to additional savings which can be invested towards retirement.

3. Review & refinance your housing loan

    - Interest rate on most housing loan has fallen tremendously over the past few months. Mortgage payment is usually one of the biggest expenses in one's balance sheet and by cutting down on mortgage repayment, these additional savings could be used towards retirement.

4. Rebalance your investment portfolio

    - Instead of adopting a "buy, hold and pray" approach in the hope that your portfolio will grow in the long term, times like these would be best to take a complete review of your asset allocation. You would want to review and rebalance your portfolio periodically eg quarterly to best take advantage of current market volatility and opportunity.

5. Have in place an Opportunity Account

    - The uncertainty when the virus became a pandemic has resulted in volatility in stock markets, with some markets falling more than 20-30% from their all-time highs. The last major financial crisis where markets corrected very substantially was in 2008, 12 years ago. For some, it is very likely this could be the last major financial crisis before their retirement. In times of crisis, some will sell out of panic, because their portfolio had dropped. Some will buy, as they see opportunity amidst the crisis. What we do with our Investment Portfolio during a major financial crisis can have a big impact on our retirement.
    - Thus beyond just having an Emergency Fund Account, it is important to have some funds as Opportunity Account, to be able to buy in when there is substantial market correction, to accumulate for the long term.

6. Review your Retirement Goals

    - If you are young and in the early phase of your career, you may be able to quickly recover from a Covid-19 setback. Assuming you were made redundant, it would not be too difficult to find next employment opportunity and from there, start to save more or hope that over time your income will grow faster.

- But if you are a senior professional who is being retrenched, you may need to consider delaying your retirement or adjusting your expectation in terms of your retirement lifestyle. This is the hard truth, but it is better to start making adjustment now than to be hit by unpleasant surprises later.
- A delay in retirement means less retirement funds required. By continuing to work for another 5 years, the number of years you would need to draw down the funds from your retirement portfolio will reduce.
- You may be 50 and your original plan was to retire at 60. You only have 10 years of runway to accumulate and you need to provide for at least 20 years till say 85. When you delay your retirement by 5 years to 65, you will have additional 5 years to accumulate, and your drawdown is shorten from 20 years to 15 years. For some families, this delay in retirement is inevitable because the savings accumulated by the desired retirement age is insufficient to support their lifestyle, and they do not wish to compromise on their retirement lifestyle.

Nevertiree & Post-Retirement Career

Not everyone wants to retire. There will be some who have the means to retire and choose to work. They are called the 'Nevertirees'. Instead of working full time in pre-retirement occupation, what could be more feasible would be a part-time employment or being self-employed in the period post-retirement. Instead of waiting till then to plan, why not start planning now?

https://www.straitstimes.com/business/banking/2-in-3-here-dont-have-savings-to-last-past-6-months-survey

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Benefit and Risk of Asset Allocation, Insurance Leverage

FINANCIAL PLANNING Association Of Singapore

Life Insurance Products: Beyond Standard Asset Class for Affluent Clients

by Mr Ron Miura Ryutaro, CFP®

First of all, what comes to your mind when you hear life insurance? Some people may think selecting the right life insurance policies might be tedious and complicated. Others might feel afraid of planning the worst-case scenario which means either death or permanent physical disability. This topic on death and permanent physical disability is considered a taboo in Asia. However, it is very important to tackle this in a professional manner and it is a valuable asset class for families.

Many people are familiar with how life insurance products work for personal protection planning. It can be family protection known as income replacement planning in case breadwinners are no more around. The death benefit would be provided as a guarantee and the insurance proceeds would be distributed to each beneficiary the client nominated under the insurance nomination. Life insurance product is a valuable asset class due to surrender cash value and liquidity. That's because the life insurance is unfazed by stock market volatility and it can function as asset diversification to hedge against investment volatility risk. Moreover, residential property owners must have the mortgage insurance planning by using term insurance policy. The purpose of this life insurance can be protection from debts in case the house owner is no longer around. The rest of family members do not have to sell their own residential property to offset mortgage if they have sufficient life insurance coverage. Some affluent clients can consider utilising life insurance as an estate equalization tool among family members to maintain emotional family harmony. There are varieties of life insurance product tools, such as term insurance, whole life, and universal life. Clients need to select and construct the right personal insurance portfolio to provide financial security and stability for their beloved ones.

It might not be a common knowledge for many buyers, yet some small-medium enterprise (SME) owners should consider purchasing life insurance to leverage it as a business insurance planning. Many SMEs in Asia are family-based enterprise, which includes sole proprietorships. Which scenario requires business life insurance? Business life insurance can be a risk mitigation strategy for corporate debt obligation in case family business owners are no longer around. Indeed, many SMEs have financial and manpower issues. Besides the family business owners, company needs to ensure key employees are also insured by business insurance as a keyman insurance. If key employees pass away while still employed at the company, the insurance proceeds would be paid out to the company. This pay-out can be used to replace new staff and offset the revenue loss of company. To mitigate business risks and ensure business succession planning, each business owners can invest in life insurance products. Even after the demise of business owners, the insurance proceeds would be distributed to the beneficiaries to provide liquidity and maintain business longevity. This strategy is known as buy and sell agreement and usually It is written by the contract. Although universal life and whole life policy can be used for business succession planning, most of the business insurance is settled by simple yet cost-effective term insurance policy.

Many people do not realise life insurance products can be utilised as a predictable retirement income planning. Usually many tend to do retirement income planning by investing in properties, fixed income products, and dividend stocks to enjoy passive income stream during their retirement period. There is nothing wrong with this strategy, however these assets are subject to tenancy risks, interest rate volatility, and market volatility risks. Other people have too much cash reserves to sustain their retirement fund due to their risk averse attitude. They also would face inflation risk and their purchasing power would be eroded gradually. To mitigate tenancy, inflation, interest rates, and market risks; adding life insurance annuity can achieve the diversified retirement portfolio. Insurance annuity offers predictable and stable income stream. Life insurance annuity as a valuable asset allocation is not correlated with sudden market fluctuations and retirees can enjoy peace of mind. The ideal retirement portfolio should be constructed in a balanced and diversified method by using different asset class.

Life insurance products may be used as a philanthropic purpose by nominating the charity organisation as a beneficiary. As the part of a legacy planning, people can buy life insurance and appoint the charity organisation client nominated under the insurance nomination. Also, life insurance products can be a gift for beloved one appointed through nomination. Therefore, it would be obvious that characteristics of life insurance provide a flexible and efficient structure for policy owners.

Life insurance products can be invested with other's people money. This strategy has been known as premium financing and people can use both cash outlay and borrow bank's money to fund the life insurance premium from the financial institutions. As the process of estate equalisation planning, some affluent clients consider investing in universal life products by using cash and borrowing money to enhance death benefit coverage and surrender cash value. Also, they can invest in life insurance annuity products to enhance annual cash benefit by borrowing money from the financial institutions. Before the client decide to invest in universal life or annuity products with premium financing, he needs to understand interest rate volatility risks. Although the current monetary policy is at lower interest rate, if the interest rate rises again, policy owners would have the burden of having additional interest payment costs.

In conclusion, it is fair to say that life insurance is simple, cost-effective yet powerful tool, and it can be a valuable asset class due to the surrender cash value and liquidity. Although life insurance planning is providing a lump sum money for others, it can protect others from unseen troubles and financial difficulties. Investing in right life insurance products can achieve asset diversification by constructing many different asset classes. Last but not least, the client has to be mindful of interest rate risks if he chooses to use financial leverage. Before you decide to invest in life insurance, please seek reliable and professional Certified Financial Planner (CFP) first. Let’s acknowledge your risk profile, liquidity situation and longer time horizon.

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Five things worth knowing about data analytics

Big data requires big analysis, or should that be big mining? Read on to learn the difference

By Bethan Rees

Data analytics, according to our Professional Refresher module, is the "field of applying qualitative and quantitative techniques to analyse large amounts of raw data in order to draw conclusions and achieve gains for the organisation utilising the information".

Data analytics uses sophisticated statistical and mathematical techniques to draw useful conclusions from the data sets generated by society. It can answer questions such as:

- How will our customer demographics change over the next ten years?
- How can we reduce our exposure to fraud?
- How are ethical investing trends impacting our business and the sector as a whole?
- What is a reasonable prediction of our sales figures for the next quarter?
- How can we increase our operational efficiency?

Here are five things worth knowing about data analytics, taken from our Professional Refresher.

1. Types of information

Big data "describes the gigantic amount of data we now create … that is almost impossible to manage and process using traditional business tools". Within this field of data, information tends to be categorised in three groups.

Structured data – "organised to a specific format with predefined fields", such as daily stock prices sampled over ten years.

Unstructured data – no predefined structure or order, lacking "labels or other descriptive information", such as social media posts or images. It can be more complex to analyse.

Multi-structured data – combines structured and unstructured. from interactions between people and

2. Types of data analysis

Descriptive – Aimed towards understanding the general characteristics of data, such as summary data and including figures such as means, quantiles and correlations.

Diagnostic – Attempts to explain why something happened. An organisation may ask why sales in certain product lines increased while others fell over a time period; a theory such as a change in consumer preferences may be put forth, “then the analyst would search the existing data or seek additional inputs to see if these support that theory”.

Predictive – Attempts to predict the future. More complex than both descriptive and diagnostic, as it compares against behaviours or phenomena, which can be unpredicatable. It can involve building a model created on the findings from descriptive or diagnostic analysis, "which will take a set of inputs and attempt to accurately predict some future event or state".

Prescriptive – Finding the best course of action based on all the information available.

Once you have analysis for forecasting, you can plan for actions with better outcomes.

3. Data mining

This is "a set of techniques or procedures used for the extraction of information from large data sets". It could involve searching for patterns or relationships among variables that aren't apparent. It uses tools and analysis techniques that can study large data sets that are too big for manual processing. Cluster analysis, for example, groups data together based on how closely associated it is.

"The difference between data mining and data analytics is a subtle one. Data mining attempts to discover hidden or unknown patterns in data. Data analytics, on the other hand, which includes forms of data analysis, is about testing hypotheses, undertaking focused research or constructing models in order to improve business processes and decision-making."

4. Data analytics and data protection

The EU General Data Protection Regulation (GDPR) "addresses concerns around how personal data is used by public and private bodies" and "also accommodates a desire for people to control how their personal data is being used and provides greater transparency around its processing".

"Organisations conducting data analytics – and collecting data from the increasing range of available sources – must comply," says the module.

5. Pitfalls of assumptions

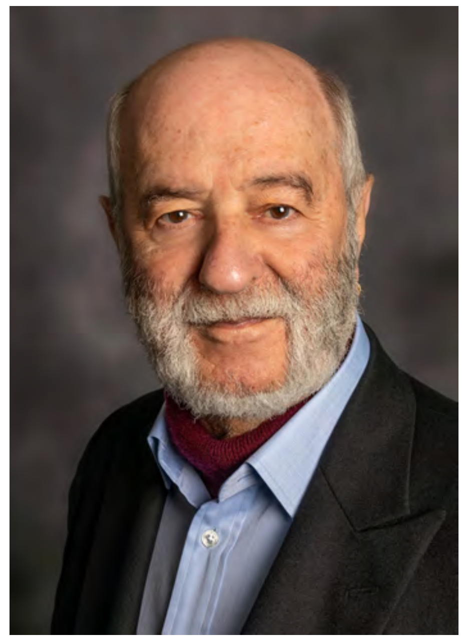
Incorrect assumptions about the data used for analysis and prediction can lead to disaster. Long-Term Capital Management (LTCM), a hedge fund in the 1990s, created “complex models to find small misspricings in financial markets”. These were exploited by using large amounts of leverage to hold large positions. LTCM thought the markets it had invested in had relatively stable correlations between assets, therefore buying a cheap asset and selling an expensive one was minimally risky.

However, market volatility in 1998 saw uncorrelated assets trading together, and LTCM began losing money. The situation was made worse by the leverage it had used. The impact of this could have been huge as the firm was a key player in the derivatives market, so a collapse would have affected the wider system and other trading counterparties. The US Federal Reserve had to step in and manage a recapitalisation. This "highlighted the risks of putting too much faith in particular historical relationships between similar assets, or trusting the stability of data used in models".

The original version of this article was published in the CISI members’ magazine, *The Review*. Republished with permission.

Dangerous Measures: The Fine Art of Calculating Returns

BY: HAROLD EVENSKY



The person responsible for translating the math chapter of my book, *Wealth Management,* into Japanese told me, "You give me much headache." Welcome to the math chapter.

Okay, class, today we're going to be discussing one of the most common activities for financial planners, namely, the calculation of investment returns. Accounting in some measurable way for changes in investment values is fundamental to the work of financial planners. It may come as a surprise to you that such a simple concept is fraught with danger. The danger lies in the potential misuse of valid measurements.

There wouldn't be much room for confusion if there were only one valid measure of investment return. Unfortunately, the mathematics of finance offers many choices. Among the most common are:

- Current return
- Total return (holding period return)
- Real return
- Compounded return
- Time-weighted return
- Dollar-weighted return (internal rate of return (IRR) and modified IRR)
- Arithmetic return

- Risk-adjusted return
- Sharp ratio

Let's consider each and I'll simplify the discussion by assuming that we're referring to the income received for a full year.

Current Return

This is perhaps the most popular measure with investors and some mutual fund marketing mavens. It is frequently referred to as the *yield* or *payout*. It's an attractive measure because it provides a simple measure of the annual payout on an investment.

$$\text{Current return} = \frac{\text{Total income received for the year}}{\text{Investment}}$$

Although simple, this measure has a major problem. Consider the number we use for total income. That single number doesn't distinguish the nature of the income. Is it interest income or principal payments, or capital gains, or some combination of those? There's no way of knowing how consistent an income stream will be in the future. I'll promise to pay you a current return of 20 percent per year as long as you don't ask me for any money after five years.

$$\text{Yield} = \frac{\text{Interest income received for the year}}{\text{Investment}}$$

Okay, let's focus on the interest income. Will that resolve the problem? Not necessarily. The bond fund we've invested in may hold many premium bonds. Those are bonds that were issued when interest rates were much higher, so although we receive significant current annual income, some of that is actually a return of principal. When bonds mature they will be paid off at par not at the bonds' current market premium value.

Now we can talk about some measures that may be more useful.

$$\textbf{Total return} = \frac{\textbf{Income + realized and unrealized capital gains - any capital loss}}{\textbf{Investment}}$$

This simple measure eliminates potential misleading factors that affect current return, but it fails to answer a number of important questions. Measuring total return is only a starting point in evaluating investment returns.

Real rate of return = Total return minus Inflation rate

Another simple but very important calculation determines what investment advisors call “real return”—how much did an investor actually make after inflation. Earning 10 percent if inflation is 3 percent would be nice, but if a few years later inflation is 8 percent and they’re still earning 10 percent total return, that wouldn’t be so nice. All our clients live in the real world, so all of your planning should be based on an “after inflation” real return.

Compounded Return

Now we’re getting to the number most investors are looking for: “What did I earn last year?” The most common measure is called the Internal Rate of Return (IRR). It’s also known as the dollar-weighted return. This calculation considers the timing of additional investments your clients made and/or withdrawals they took during the year and the return of the investments in the portfolio.

Time versus Dollar-Weighted Return

We’re not done yet, one more to go. The power of IRR to include interim additions and withdrawals from the portfolio is also its Achilles’ heel. If you’re evaluating the performance of a portfolio when you have control of the external cash flows, the IRR provides a valid measure. If you have no control of the external cash flows—when your client adds or withdraws money—you need to consider using two measures. The IRR will provide a valid measure of your client’s portfolio performance; however, it will not answer the question of how successful your recommendations were.

To answer that question, you need an alternative investment-return calculation known as the Time-Weighted Return (TWR). Basically, this measure calculates how the investment would have performed if no new additions or withdrawals had been made during the year. After all, if you and your selected money managers have no control of the timing of external cash flows, your performance should not be penalized (or rewarded) for your client's unfortunate (or fortunate) investment timing.

For example, consider the results of two investors, each of whom invested in the same mutual fund. Investor A invested $90 at the beginning of year one and an additional $10 at the beginning of year four. Investor B placed $10 in the portfolio at the beginning of year one and $90 at the beginning of year four. Here are the results of their investments:

	INVESTOR A		INVESTOR B	
Year-End	Investment	Portfolio Value	Investment	Portfolio Value
INITIAL	$90		$10	
1		$108	$12	
2		$97		$10
3		$97		$10
4	$10	$139 $90		$121
5		$153		$144
Average annual return		10.6%		8.8%
Internal rate of return (or dollar weight)		9.4%		16.7%
Time-weighted return		9.0%		9.0%

So there you have it, two investors, investing in the same portfolio, resulting in six different performance numbers. What do those numbers tell us? The average annual return? Not much. The dollar-weighted return? Investor B was lucky and invested the bulk of his money at opportune times and the advice was credited with a 9 percent annualized return.

This blog is a chapter from Harold Evensky's "Hello Harold: A Veteran Financial Advisor Shares Stories to Help Make You Be a Better Investor". Available for purchase on ***Amazon****.*

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Continuing Professional Development (CPD)

Welcome to the CPD quiz!

This quiz is 8 questions long, and you need to answer 6 out of 8 correctly in order to earn 5 CPD points. Your quiz results will be provided after you complete all the questions.

You will be able to take the quiz up to two times.

Good luck!

Decoding the Time Value Concept

1. Which one of the following is used in financial mathematics to evaluate the

Return generated by a project, or an investment, wherein the cashflows and revenues are accounted at different dates every year, and not on the same dates, during the investment period?

a. Real Rate of Return (RRR)
b. Internal Rate of Return (IRR)
c. Extended Internal Rate of Return (XIRR)
d. Effective Rate of Return (EFF)

Equity Valuation Models - Simplified

2. In the Multiplier Model, the valuation of a stock is determined by a ratio of price to some fundamental metric such as earnings or sales etc. Which one of the below is a limitation of the methodology used by this Model?

a. The ratio, such determined, must be compared to either peer group companies or to an industry average.
b. It is highly dependent on the quality of inputs and is also sensitive to changes in the estimates.
c. It cannot be used when the company has a high proportion of intangible assets.
d. It relies on past data and not on future earnings.

Solvency Margin for Insurance Companies

3. Every insurer, and reinsurer, is bound to maintain the required solvency margin in accordance with the provisions. Such margins are prescribed by the Regulator to ensure:

a. Surplus to meet routine expenses
b. Surplus to expand business
c. Surplus to fund acquisition of assets
d. Surplus to meet claim liabilities

Think Ahead: Post Covid-19 Retirement Planning

4. The author proposes that financial planners can suggest clients to consider a delayed retirement. Which one of the following is the underlying reasoning of the author in recommending such a strategy?

a. The general increase in life expectancy.
b. The number of years for which the funds would be required, post-retirement, reduces.
c. It provides wider margin for rebalancing investment portfolio.
d. To accumulate wealth in the Opportunity Account in the long term.

Benefits & Risks of Asset Allocation, Insurance Leverage

5. The author believes that business owners should consider purchasing life insurance to leverage it as a business insurance planning tool. Which of the following benefits can be derived by the business owners by leveraging insurance?

    a. As a risk mitigation strategy for corporate debt obligation in case of unfortunate demise of the business owner.
    b. Pay-outs from Keyman insurance can be used to replace new staff.
    c. Insurance proceeds can be distributed to the beneficiaries to provide liquidity & business longevity.
    d. All of the above.

Five (5) things to know about Data Analytics

6. Data analytics refers to applying qualitative and quantitative techniques to analyze raw data in order to draw conclusions. ‘Attempts to explain why something happened’ could be summarized as which one of the following types of data analysis?

    a. Descriptive
    b. Diagnostic
    c. Predictive
    d. Prescriptive

Dangerous Measures – the Fine Art of Calculating Returns

7. Which one of the following returns is to be considered while evaluating the performance of a portfolio wherein the client has been adding or withdrawing sums of money at uneven time periods?

a. Time-weighted return
b. Dollar-weighted return
c. Real rate of return
d. Current return

Alternative Investments – Looking Beyond Traditional

8. Private Equity (PE) is a popular alternative investment option for the large institutional investors. Which one of the following is a feature of PE investments?

a. They are publicly traded
b. There is vibrant liquid, secondary market for PE investments
c. They have transparent disclosure policies
d. Private equity can be debt or equity securities

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