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# The nexus amongst financial literacy, financial behaviour and financial well-being of professional footballers in Ghana

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## ABSTRACT

**Purpose:** This paper examines the financial literacy, financial behaviour, and financial well-being of professional footballers in Ghana, and the interrelationships amongst these constructs.

**Methodology:** A cross-sectional survey was conducted using 300 professional footballers from the Ghana Premiere League and the hypothesized relationships were tested using the partial least squares, structural equation modelling technique.

**Findings:** The results indicate low levels of financial literacy, and poor financial behaviour among footballers. The results suggest that to promote responsible financial behaviour amongst footballers, enhancing their financial literacy is key. We find very strong support for the argument that responsible financial behaviour, proxied in this study by savings and investment behaviour, is key to attaining financial wellness in life.

**Practical Implications:** The findings suggest that targeted policy initiatives aimed at enhancing the financial well-being of footballers should begin with investing in training programmes to make them financially literate. In addition, practical financial guidance should be given to footballers to help shape their financial behaviour.

**Contribution:** Prior studies on financial literacy, financial behaviour, and financial well-being have focused predominantly on professionals with industrial jobs. This paper extends knowledge in the field with some new insights from professional footballers.

## ARTICLE HISTORY

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## KEYWORDS

Professional footballers; financial literacy; financial behaviour; financial well-being

## Introduction

In many parts of the world especially in Europe, China and the United States, footballers are among the highest-paid sportsmen, and compared with other professions, their compensation packages are, by far, better. Footballers have consistently been listed among the top highest-paid athletes in the world for years. A May 2023 Forbes report lists three football

stars Cristiano Ronaldo, Lionel Messi and Kylian Mbappe as the top three highest-paid athletes in the world with pre-tax revenues of \$136 million, \$130 million, and \$120 million respectively (Knight, 2023). The unfortunate reality, however, is that the retirement experiences of many former professional footballers have been awful. Within the sports media landscape, there have been reported cases of once-

wealthy footballers who have gone bankrupt soon upon retirement (Balliauw & Van Den Spiegel, 2018; Dean, 2013; Kuper, 2013; Pagliarini, 2013; Preston, 2013; Roddy, 2021). For instance, ex-England and Manchester United star, Wes Brown, was declared bankrupt in April 2023 despite earning about 50,000 Euros a week while in active play. John Arne Riise, ex-Liverpool and AS Roma star, Celestine Babayaro of Chelsea and Paul Merson of Arsenal were all wealthy footballers who went bankrupt upon retirement. Indeed, cases of several footballers who are unable to cater for the necessities of life soon after their active football years have been on the ascendency.

According to Barth et al. (2021), this unfortunate situation, in part, stems from the fact that the danger of falling into a professional void is high among footballers given that, like most other sports, the skills acquired in football are not easily transferable to other non-sporting occupations. Against the backdrop that the availability of job positions in football is also very limited, most footballers find themselves in a situation in which they earn very high income during their active career period and face a high degree of income uncertainty upon retirement (Barth et al., 2021). While the effect of this uncertainty on post-retirement life cannot be underestimated, the lifestyle of footballers (during the active playing period and upon retirement) has also been highlighted by several reports to be a key driver of the financial mess that some footballers have gotten themselves into. Indeed, Law et al. (2021) point out that the pressure to feel accepted by others pushes some professional footballers to live above their means to portray a particular image deemed acceptable by society. Again, there have been reported cases of footballers engaging in very irresponsible financial behaviours including gambling, spending on luxurious brands, lavish parties and generally maintaining what can be described as an expensive and highly unsustainable lifestyle. Given that the lack of financial knowledge has

often been associated with the financial behaviour of individuals (Chhatwani & Mishra, 2021; Oquaye et al., 2022; Owusu et al., 2022), this study investigates the level of financial literacy of professional footballers and ascertains its impact on both their financial behaviour and financial well-being.

The motivation to examine these constructs focusing on professional footballers is two-fold. First, while concerns have been raised about the financial literacy levels of most individuals, it has been documented that the challenge is more pronounced with professional sportsmen, particularly footballers (Churro, 2022; Moolman, 2022). For instance, unlike professionals in other industrial jobs, footballers have a relatively shorter time to work actively before retirement and also, their lives are often so structured that they are left with less time to plan and take financial initiatives. Moreover, many footballers start their professional careers as teenagers and more often than not without any financial literacy skills to manage their incomes.

Second, unlike other professionals, it is difficult for footballers to take up other jobs as additional sources of income in their active days or transition into other jobs upon retirement. The explanation is that most footballers start their professional careers at an early stage when their peers are still schooling. This makes them less qualified to gain employment in other industrial jobs when their football career is over (Curran, 2015). Again, not only do footballers retire at an earlier age than their peers in other industrial jobs but in some instances, their career ends prematurely due to long-term injury and other career trajectories such as not getting regular playing time, falling out of favour with a new manager, and getting their contract terminated abruptly (Roderick, 2006). Therefore, the risk of falling into financial trouble is high based on the peculiar challenges associated with their profession.

Motivated by these needs, this study attempts to examine the financial literacy levels of professional footballers and explore

its linkages with their financial behaviour. The study additionally ascertains if financial literacy and financial behaviour may be good predictors of the financial well-being of footballers. The analysis we present is relevant given that despite the unique challenges that confront footballers, very few studies, to date, have examined the concept of financial literacy and financial behaviour and how they impact the financial well-being of sportsmen, particularly footballers. Again, the few studies that have examined financial well-being in the field of sports have focused mainly on sports clubs and groups but not on individual sportsmen, especially footballers with data predominantly from the developed world (Nanda & Banerjee, 2021; Stewart, 2017). This study contributes to the existing research by providing insights into the financial well-being of professionals from the perspective of footballers employing data from a developing country context. To practice, the findings of this study highlight some relevant mechanisms that can be used to enhance the financial well-being of footballers. The rest of the paper is organized as follows, the next section presents a review of the constructs of interest and the hypotheses developments. The subsequent sections discuss the methods employed in achieving the study objectives and the discussion of the study findings. The paper ends with some concluding remarks, practical implications and suggestions for future research.

## Literature review

### *Financial literacy*

Financial literacy (FL) has been conceptualized by Remund (2010) as the ability to use the needed knowledge and skills to manage one's financial resources effectively to improve welfare in the future. According to Jappelli and Padula (2013), FL is a measure of how well an individual can understand and use information related to finance. Llewellyn (2012) considers FL

to involve an individual's ability to interpret and understand basic financial concepts and to apply knowledge to make informed decisions. To Mahendru (2020) FL is a skill that allows people to make decisions aimed at the effective management of money through appropriate short-term decision-making and long-term planning. The OECD conceptualizes FL as "the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being". From these definitions, FL involves being knowledgeable in matters of finance and the application of financial knowledge in making financial decisions.

Shuttleworth (2011) emphasizes that individuals who are less financially literate might feel overwhelmed and uncertain when confronted with highly complex financial information. Financial illiteracy can be considered as a communication barrier, similar to bad connections, poor acoustics or any other distraction that leads to uncertainty in making financial decisions. To Robb and Woodyard (2011), learning how to manage money is as important as learning how to make it.

### *Financial behaviour*

Kholilah and Iramania (2014) define financial behaviour (FB) as "one's ability to regulate planning, budgeting, checking, managing, controlling, searching and storing daily funds". FB can be viewed through concepts such as spending and saving habits, borrowing patterns, budgeting level and access to financial products. While Özmete (2019) suggests FB is relevant to money management and includes cash, credit, saving and investing behaviour, Tezel (2015) argues that FB goes beyond one's ability to manage such financial processes. FB also involves understanding the overall impacts of financial decisions on one's circumstances and making the right decisions related to these financial processes. As a concept, FB has frequently been measured by reference to the savings and investment behaviour of people.

According to Dholakia et al. (2016), savings behaviour refers to the individual's activities to save money, some of which are habitual and routinized, while others are opportunistic and intentional, incorporated into his or her lifestyle. Savings behaviour is nurtured from day-to-day actions, that promote savings or a saving lifestyle and it is usually constructed over time (Nenkov et al., 2008; Ponchio et al., 2019; Shockey & Seiling, 2004). Investment behaviour, on the other hand, is formed when individuals make a conscious effort to commit some amount of money for future use to preserve the value and earn some returns. Several factors have been associated with the investment behaviour of people such as attitude, demographic characteristics, social status, and the personality type of an individual (Akhtar et al., 2018; Kannadhasan et al., 2016; Kappal & Rastogi, 2020; Parsaeemehr et al., 2013; Zarri & Buccioli, 2017). In recent times, the FB of individuals has become a topical issue following the financial turmoil that hit the world which affected the savings and investment behaviour of people (Castro-González et al., 2020).

### ***Financial well-being***

Financial well-being, according to Kempson and Poppe (2018) is the extent of control an individual has over daily expenses, the capacity to absorb financial shocks and meet future needs; and have some degree of freedom to make choices that permit enjoyment of life. The Consumer Financial Protection Bureau (CFPB), alternatively, defines financial well-being as a state of being wherein a person can fully meet current and ongoing financial obligations, can feel secure in their financial future, and can make choices that allow enjoyment of life. From these definitions, a good measure of financial well-being should not only concentrate on meeting present needs, but also examine the ability of an individual to meet future financial commitments.

The emphasis is therefore placed on the individual's future resilience to experience financial well-being (Oquaye et al., 2022).

Generally, financial well-being can be measured on situational (objective) and psychological (subjective) dimensions. Whereas objective measurements such as income and wealth can affect an individual's sense of well-being, subjective financial well-being encompasses an individual's satisfaction with the income or wealth acquired. Subjective financial well-being is, therefore, a more comprehensive measure of financial well-being because it includes an internal and individual assessment of the amount of a person's financial resources (Taft et al., 2013).

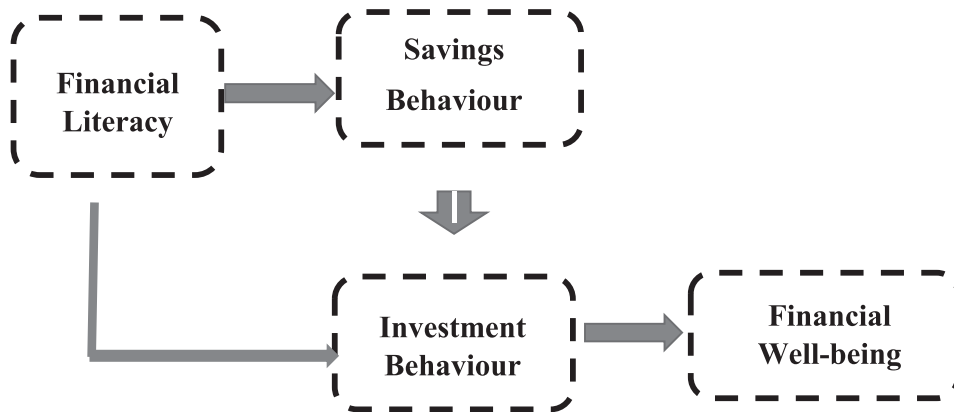
### ***Conceptual framework and hypothesis development***

The conceptual framework used in the study (shown in Figure 1) was developed drawing from models in the existing literature that had similar objectives as the study. The conceptual framework is a pictorial representation of the relationship among the constructs of interest.

Based on the conceptual framework (Figure 1), the study tests the hypotheses that financial literacy will impact the financial behaviour of individuals, and consequently, impact financial well-being.

### ***Financial literacy and financial behaviour***

Individuals with better knowledge and understanding of financial concepts tend to exhibit responsible financial behaviours such as saving money and investing some money for the future (Zulaihati et al., 2020). Individuals with greater financial literacy are more likely to pay bills on time, save some of their earnings, manage credit cards wisely, participate in financial markets and invest in stocks and other ventures (Lusardi et al., 2010). Robb and Woodyard (2011) provide evidence that good



**Figure 1.** Conceptual framework.

financial behaviour is subjectively and objectively influenced by a higher level of financial literacy. Jamal et al. (2015) specifically conclude that financial literacy impacts saving behaviour positively. de Bassa Scheresberg (2013) also reports that financial literacy has a positive influence on financial behaviour, translating into saving for emergencies, saving for day-to-day activities and investing for later use. Atia (2012) points out that financial literacy has the potential to reduce the likelihood of individuals getting trapped in unscrupulous practices and hence, such individuals are likely to have enough to save and invest for future needs.

In this study, we posit that financially literate footballers will have a better understanding of managing their incomes. Such individuals will know the need to cultivate good savings habits which could transcend into responsible investment behaviours. Thus, their levels of financial literacy will impact positively their financial behaviour such as savings and investment behaviour. Kumar et al. (2018); Allgood & Walstad (2016); Bannier & Neubert (2016) highlight a positive relationship between financial literacy and financial behaviour for different groups of individuals. Similar to these studies, we hypothesize that financial literacy positively impacts the financial behaviour of footballers in Ghana specifically their savings and investment behaviour.

### ***Financial behaviour and financial well-being***

A healthy balance between spending and savings is imperative for sustaining financial well-being in the long run (Van Praag et al., 2003). A higher propensity to save could result in improved bargaining power or decision-making authority (Schaner, 2017), lower possibilities of selling assets to meet financial emergencies (Jack & Suri, 2014), increased productivity, and ultimately better financial well-being (Kempson et al., 2013). Being aware of one's financial behaviour is necessary to enhance one's future financial prospects. As asserted by Netemeyer et al. (2018), Huston (2010) and Perry and Morris (2005), financial well-being is an outcome of the investment behaviour of individuals.

Studies have examined various antecedents to financial well-being including money attitudes, self-management, financial resilience, financial capability, and financial inclusion. In this study, the focus is given to the financial behaviour of footballers in Ghana and their levels of financial literacy as key contributors to the financial well-being of footballers. Hong and Coffee (2018) report that most sportsmen are often given psychological support, career planning, academic advice, and job preparation but not support concerning financial literacy.

Moreover, Hong and Fraser (2021) and Moolman (2022) highlight the importance of financial literacy in assisting sportsmen to live quality lives and attain sustainable financial well-being. Some footballers are reported to have made critical financial errors such as investing unwisely due to poor financial literacy and inappropriate financial behaviour (Hong & Fraser, 2021).

The study argues that footballers with basic knowledge of money management and the ability to exhibit responsible financial behaviour are likely to meet immediate needs and potentially prepare for long-term needs, which enhances their financial well-being. Evidence of the positive relationship between financial behaviour and financial well-being is seen in the reported findings of existing studies that suggest that financial behaviour plays a crucial role in helping individuals to achieve financial well-being (Brüggen et al., 2017; Oquaye et al., 2022; Serido et al., 2010; Shim et al., 2009; Xiao et al., 2011). Similarly, in this study, we posit that two dimensions of financial behaviour, savings, and investment behaviour, are key to the financial well-being of footballers. Hence, the study hypothesizes a positive and significant relationship between savings and investment behaviour and financial well-being.

## **Methodology**

### ***Research design, research instrument and data collection***

The study adopts a quantitative approach by employing the survey research design. All registered professional football players with clubs that competed in the 2020 Ghana Premier League (GPL) constituted the population of the study. The GPL commenced in December 1993 in six league centres across Ghana (GFA, 2013). Currently, the GPL has a total of 18 premier league clubs registered for the 2022/2023 season with a total of 480 registered footballers. Compared with clubs in Europe,

England, Asia and even many parts of Africa, the net worth of Ghanaian clubs is very low. Revenues from international transfers which constitute an important funding source for most Ghanaian clubs have been very low over the years. For instance, the Federation of International Football Association (FIFA) in its 2021 report on international transfers records that Ghanaian football clubs together made a net profit of only \$50 million in the last decade (FIFA, 2021).

All clubs registered in the premier league were given equal opportunity to partake in the study and questionnaires for the total number of footballers in each club were given. However, the sample used for the study represents all footballers in the premier league who were willing to participate in the survey. Data were collected using structured close-ended questionnaires that were administered to the footballers. The questionnaire comprised two main sections; the first section focused on the demographic details of the respondents while the second section sought responses to questions on the financial literacy, financial behaviours, and financial well-being of the footballers.

The study constructs were measured using existing instruments that have been employed by prior studies. Financial literacy and financial well-being were measured using scales developed by the Consumer Financial Protection Bureau whereas financial behaviour was measured by adopting the scale developed by Dew and Xiao (2011). The indicators for each construct were rated on a seven-point scale with anchors ranging from one (strong disagreement) to seven (strong agreement). The questionnaires were administered to the footballers during training sessions and club meeting times with permission from the officials. The administration was done by one of the researchers who was an administrator with a top premier league club at the time of the study and hence, had easy access to the clubs. Out of the total of 480 questionnaires that were distributed, 312

were returned representing a response rate of 65%. A total of 12 of the questionnaires received were, however, excluded from the final analysis because respondents did not fully answer the questions set.

### **Data analysis and results**

The data collected were first analysed descriptively to examine the demographic characteristics of the respondents and their views on the constructs using the Statistical Package for the Social Sciences (SPSS). Subsequently, inferential analysis using the Partial Least Squares Structural Equation Modelling (PLS-SEM) technique was performed to examine the relationships among the constructs. The SEM approach is an effective tool for predicting relationships among latent or unobserved variables with multiple indicators as used in this study (Astrachan et al., 2014). SEM also enables researchers to evaluate measurement models and structural paths more efficiently and can estimate several model relationships simultaneously (Afthanorhan, 2013; Astrachan et al., 2014; Hair et al., 2012).

### **Descriptive statistics of respondents**

An analysis of the demographic characteristics of the respondents (in Table 1) shows that the population is largely youthful with the majority (nearly 90%) being either 30 years and below. This is expected as footballers are mostly in active sports only in their prime years. The results suggest most of the respondents (about 86%) have had some form of education, mainly up to senior high school level. The majority of the respondents were married and close to 58% of them had three or more dependents aside from their nuclear family. On average, most of these footballers earn only GHS2000 net monthly income (the equivalent of USD 177), do not live in their own houses and about 39% of them live with their parents or friends.

**Table 1.** Demographic statistics of respondents.

Demographic Variable	Groupings	Frequency	Per cent
Age	Below 17	11	3.7
	18–20	33	11.0
	21–23	91	30.3
	24–30	143	47.7
	31 and above	22	7.3
Educational Level	Uneducated	42	14.0
	JHS	82	27.3
	SHS	146	48.7
	Diploma	23	7.7
Income Level (GHS)	Degree	7	2.3
	Less than 2000	155	51.7
	2000–3500	98	32.7
	3501–5000	34	11.3
Marital Status	Above 5000	8	2.7
	Single	229	76.3
	Married	67	23.7
Number of Dependents	1	54	18.0
	2	73	24.3
	3	83	27.7
	4	59	19.7
	5 or more	31	10.3
Housing	Own house	41	13.7
	Renting house	143	47.7
	Staying with parents	35	11.7
	Staying with Friends	81	27.0

### **Descriptive statistics of constructs**

The analysis reveals that, generally, footballers used for this study have a low level of financial literacy. The overall mean for the financial literacy construct was 3.35, which is less than the average of 3.5. The indicator “I set long-term financial goals and strive to achieve them” had the highest mean score of 3.86 while the indicator “I read to increase my financial knowledge” had the lowest mean score of 2.54. Thus, although the respondents rank setting of long-term goals high, their interest in seeking financial knowledge is very low. It is, therefore, not surprising that most of the respondents seem “uncertain about where their money is spent” (mean = 3.65).

Financial behaviour recorded an overall mean score of 3.14 (below the mid-point value). Thus, most of the respondents, generally, do not exhibit responsible financial behaviour. From the analysis, very few of the

respondents have interest in investment products such as bonds, stocks, mutual funds and insurance policies on health or property. The respondents, however, are diligent in comparing prices in different shops when purchasing a product or service (mean = 4.60).

The construct financial well-being recorded an overall mean slightly above the average (3.78). This result suggests that most of the respondents are confident in their capacity to meet current financial needs, have a very positive outlook about their future financing needs and make choices to enjoy life. This is expected given that the average footballer is always hopeful of securing lucrative contracts in future. The indicator "My finances control my life" recorded the highest mean score of 4.80 amongst the indicators of financial well-being. Interestingly, we find that most respondents do not have access to ready cash or credit to meet emergencies that may arise. The indicator "I would have trouble getting GHC2000 in cash or credit to meet an unexpected need within the next month" recorded a high mean score of 4.63 which shows a high level of agreement with this question. Moreover, the analysis suggests that for most respondents, "Giving a gift for a wedding, birthday or another occasion would put a strain on their finances for the month" (mean = 4.10). As expected, with the low incomes earned by the respondents, very few of the respondents save towards their future finances. The indicator "I currently have an automatic deposit or electronic transfer set up to put money away for future use" recorded the lowest mean score of 3.11. On a month-on-month basis, the respondents indicate that they barely have any money left after the month's expenses (Table 2).

### **Reliability and validity**

The study adopted the two-step approach proposed by Hair et al. (2012) for SEM analysis. The study first tests the model fitness by assessing the measurement model for construct reliability

and validity. Composite reliability (CR) and Cronbach's alpha (CA) values were used to assess reliability while the average variance extracted (AVE) and the heterotrait-monotrait criterion (HTMT) were used to assess the validity of the constructs. The CR and CA scores, as shown in Table 3, were all above the recommended threshold of 0.7 and hence provide evidence of the reliability of the model. The convergent validity of the constructs was attained as the AVE scores were all above the recommended threshold of 0.5. The HTMT results, as shown in Table 4, indicates that discriminant validity was achieved as the values for all variables were distinctively different at values below 0.90, as recommended by Henseler et al. (2015). Importantly, the result of HTMT infers that the variables are distinctively different from one another.

### **Structural model analysis**

Upon attaining model fitness, we proceeded to assess the structural model. First, probable traces of multicollinearity were tested using the variance inflation factor (VIF). The results for both the inner VIF values for the constructs and the outer VIF values for each indicator were all below the recommended threshold of 10 (Table 5) which suggests no multicollinearity issues (Hair et al., 2011). In addition, to guard against socially desirable answers, the study tested for common method bias using the Herman one-factor test. The result of the test shows that the percentage variance for the first factor is approximately 33% (Table 5) which is less than the recommended threshold of 50% (Podsakoff and Organ, 1986), hence there is no problem with common method bias.

Further, we estimated the coefficient of determination ( $R^2$ ) and the cross-validated redundancy ( $Q^2$ ). An  $R^2$  of 27.6% recorded for financial well-being suggests that about 28% of the variation in the construct financial well-being is explained by investment behaviour. Investment behaviour had an  $R^2$  of 60.4%

**Table 2.** Descriptive statistics of constructs.

Code	Indicators	Mean	Std. Deviation
FL1	I know much about financial services and products (like banks accounts, loans, insurance, credit cards, banks, and financial counsellor)	3.16	1.13
FL2	I feel confident when I make decisions about financial services and products (like banks accounts, loans, insurance, credit cards, banks, and financial counsellor)	3.20	1.25
FL3	I have never sought financial advice or information to help with money troubles, or set money goals.	3.30	1.67
FL4	I set long-term financial goals and strive to achieve them	3.86	1.91
FL5	I plan and implement a regular savings/investment schedule	3.67	1.83
FL6	I feel credit cards are safe and risk-free	3.45	1.74
FL7	I am uncertain about where my money is spent	3.65	1.77
FL8	I read to increase my financial knowledge	2.54	1.76
	<b>Overall – Financial Literacy</b>	<b>3.35</b>	<b>1.63</b>
FB1	I compare prices in different shops when purchasing a product or service	4.60	1.82
FB2	I pay all my bills (electricity, water, telephone, etc.) on time	4.04	1.93
FB3	I preserve a written or electronic record of my monthly expenses	3.35	1.97
FB4	I stay within my budget or spending plan	3.70	1.70
FB5	I pay off the overdraft balance in full each month	2.97	1.94
FB6	I regularly exceed the maximum withdrawal limit on one or more ATM cards	3.18	1.77
FB7	I usually pay more than the minimum repayments on my loan	2.98	1.80
FB8	I have begun or maintained an emergency savings fund	3.47	1.80
FB9	I save money from every income received	3.68	1.83
FB10	I save for a long-term goal such as purchasing a car, education, home, etc.	3.33	1.88
FB11	I contribute money to a retirement account	2.76	1.95
FB12	I buy bonds, stocks, mutual funds or long-term investments	2.22	1.78
FB13	I maintain or purchase an adequate health insurance policy	2.25	1.93
FB14	I maintain or purchase adequate property insurance such as comprehensive auto or homeowners' insurance	2.24	1.90
FB15	I maintain or purchase adequate life insurance	2.31	1.93
	<b>Overall – Financial Behaviour</b>	<b>3.14</b>	<b>1.86</b>
FW1	I can handle a major unexpected expense	3.26	1.96
FW2	I am securing my financial future	3.59	1.87
FW3	Because of my money situation, I feel like I will never have the things I want in life	3.92	1.96
FW4	I can enjoy life because of the way I'm managing my money	3.69	1.84
FW5	I am just managing my expenses with my current income	3.88	1.90
FW6	I am concerned that the money I have or will save won't last in the long run	3.76	1.98
FW7	Giving a gift for a wedding, birthday or another occasion would put a strain on my finances for the month	4.10	2.00
FW8	I have money left over at the end of every month	3.39	1.90
FW9	I am unable to pay my bills as and when they fall due	3.97	2.07
FW10	My finances control my life	4.80	2.30
FW11	I currently have an automatic deposit or electronic transfer set up to put money away for future use	3.11	1.93
FW12	The cost of my living expenses is usually less than my income	3.38	2.23
FW13	I would have trouble getting GHC2000 in cash or credit to meet an unexpected need within the next month	4.63	2.33
FW14	The value of my assets is at least 6 times my current monthly income	3.41	2.17
	<b>Overall – Financial Well-being</b>	<b>3.78</b>	<b>2.03</b>

Note: FL = Financial literacy; FW = Financial well-being; FB = Financial behaviour.

**Table 3.** Cronbach alpha, composite reliability and average variance extracted.

Construct	CA	CR	AVE
Financial Literacy	0.858	0.891	0.543
Financial Well-being	0.817	0.868	0.526
Investment Behaviour	0.938	0.951	0.766
Savings Behaviour	0.875	0.901	0.513
Age	1.000	1.000	1.000
Education	1.000	1.000	1.000
Income	1.000	1.000	1.000
Marital Status	1.000	1.000	1.000

which indicates that approximately 60% of the variation in investment behaviour is a result of financial literacy and savings behaviour. Financial literacy was found to be accountable for about 59% of the variations in savings behaviour as the construct recorded an  $R^2$  of 58.7%. The result from the blindfolding analysis (Table 6) shows that the  $Q^2$  of the variables, financial well-being, investment behaviour

**Table 4.** HTMT results.

Construct	FL	FW	IB	SB			
Age							
Educational Level	0.261						
Financial Literacy	0.192	0.357					
Financial Wellbeing	0.241	0.341	0.627				
Income Level	0.473	0.406	0.473	0.418			
Investment Behaviour	0.252	0.214	0.737	0.585	0.347		
Marital Status	0.263	0.098	0.186	0.066	0.252	0.087	
Savings Behaviour	0.297	0.301	0.849	0.728	0.485	0.813	0.171

and savings behaviour were 0.139, 0.454 and 0.293, respectively, an indication that the model has predictive importance as the  $Q^2$  are above zero (Hair et al., 2012).

The structural model for the study (Figure 2) shows the study constructs and the relationships among them. In this model, the main variable of interest is financial well-being which is explained by investment behaviour. Investment behaviour is influenced by the level of financial literacy and savings behaviour of individual, whereas savings behaviour is explained by financial literacy. The structural model analysis was done following the bootstrapping procedures in Smart-PLS. The results from the bootstrapping are shown in Table 6 detailing the hypothesized relationships, the coefficients, the attained level of significance ( $p$ -values) and the results thereof.

## Discussion of results

Table 6 presents the results of the analysis of the direct and indirect relationships among the constructs.

First, we find a positive and highly significant ( $p$ -value < 0.01) relationship between financial

literacy and savings behaviour, a confirmation of our hypothesis. This means that the propensity to save is usually higher among individuals with good knowledge of financial matters. Thus, individuals with adequate financial knowledge tend to make sound financial decisions such as cultivating good savings behaviour. This result is consistent with findings from prior studies which suggest that financial literacy influences the savings attitude of individuals (Jamal et al., 2015; Kim et al., 2019; Lusardi, 2008; Murendo & Mutsonziwa, 2017; Zulaihati et al., 2020).

Similarly, financial literacy is highly significant ( $p$ -value < 0.01) and positively related to investment behaviour, in line with the study hypothesis. This suggests that financially literate individuals tend to engage more in responsible investment behaviour than their peers. By implication, beyond saving for contingencies, financially literate individuals are more likely to invest to secure a better future. Hong and Fraser (2021) report that some sportsmen made critical financial errors such as investing unwisely due to financial illiteracy. Several empirical studies (Civelek et al., 2019; Kalmi, 2018; Moreland, 2018; Owusu et al., 2022; Van Rooij et al., 2011) support the assertion that financial literacy positively impacts an individual's investment behaviour. This finding indicates that to promote responsible financial behaviours amongst individuals, enhancing their financial literacy is key.

As expected, savings behaviour had a positive and statistically significant relationship with investment behaviour ( $\beta = 0.546$ , and  $p$ -

**Table 5.** VIF and CMB results.

Construct	VIF
Financial Literacy	2.398
Investment Behaviour	1.000
Savings Behaviour	2.398
Age	1.336
Education	1.207
Income	1.480
Marital Status	1.100
Herman's single-factor score	0.33

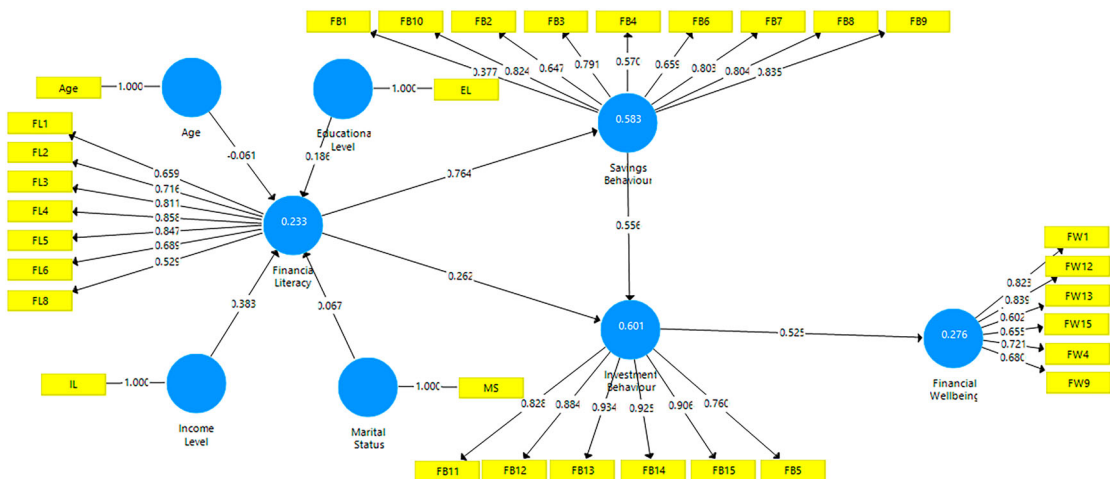
**Table 6.** Hypothesis path, coefficient, *p*-value.

Hypothesis path	Coefficient	<i>p</i> -values
<b>Direct Effects</b>		
Financial Literacy -> Savings Behaviour	0.766	0.000
Financial Literacy -> Investment Behaviour	0.275	0.000
Savings Behaviour -> Investment Behaviour	0.546	0.000
Investment Behaviour -> Financial Well-being	0.525	0.000
<b>Indirect Effects</b>		
Savings Behaviour -> Investment Behaviour -> Financial Well-being	0.287	0.000
Financial Literacy -> Investment Behaviour -> Financial Well-being	0.144	0.000
<b>Demographics</b>		
Age -> Financial Literacy	-0.061	0.339
Education -> Financial Literacy	0.186	0.001
Income -> Financial Literacy	0.383	0.000
Marital Status -> Financial Literacy	0.067	0.145
<b>R<sup>2</sup></b> (FL= 0.233; FW = 0.276; IB = 0.604; SB = 0.587)		
<b>Q<sup>2</sup></b> (FL = 0.123; FW = 0.139; IB = 0.454; SB = 0.293)		

Note: FL = Financial Literacy; FW = Financial Well-being; IB = Investment Behaviour; SB = Savings Behaviour.

value = 0.000). This is an indication that individuals with good savings attitudes have greater motivation to invest. An individual's propensity to save, therefore, influences his or her ability to develop a positive attitude towards investment. Given that the savings and investment behaviours of individuals are interrelated, an important way of promoting a responsible investing attitude is to encourage people to first, cultivate a habit of saving. Studies that report similar results include Oquaye et al. (2022); Farrell et al. (2016) and Kempson et al. (2013).

The relationship between investment behaviour and financial well-being yielded a positive and highly significant result, consistent with the study's proposition. The results suggest that the investment behaviour of individuals has important implications for their financial well-being. Thus, the ability of an individual to meet current financial obligations and feel secure about future financial needs depends, substantially, on the effort to commit part of his/her current earnings into investment products. This result is consistent with the findings of prior studies (Balliauw & Van Den



**Figure 2.** Structural model.

Spiegel, 2018; Farrell et al., 2016; Kempson et al., 2013; Oquaye et al., 2022).

The result also indicates a positive and significant relationship between savings behaviour and financial well-being mediated by investment behaviour. This suggests that individuals who consistently incorporate the habit of savings are likely to enjoy better financial well-being when they equally cultivate the right attitude towards investment. By implication, savings behaviour on its own does not affect financial well-being unless backed by responsible investment behaviour.

The findings suggest that financial literacy influences financial well-being indirectly through investment behaviour ( $\beta = 0.144$ , and  $p$ -value = 0.000). This means that merely being knowledgeable about financial issues is not a guarantee that a person will be financially secure in the future. The level of financial knowledge an individual has will foster good a responsible attitude towards investment which will yield financial gains for the individual to secure his/her financial future. Lyons (2008) and Rao and Barber (2005) similarly report that financial literacy influences financial well-being given the right financial behaviour.

Additionally, the study examines the effect of demographic characteristics on the respondents' financial literacy levels. We find the educational level ( $\beta = 0.186$ , and  $p$ -value = 0.001) and income level ( $\beta = 0.383$ , and  $p$ -value = 0.000) to be relevant predictors of the financial literacy levels of footballers. This suggests that educated individuals tend to appreciate financial issues better than their peers and individuals with higher income levels tend to be more financially literate than their peers. As pointed out by some extant studies (Kumar et al., 2018; Mishra & Metilda, 2015), educated individuals are more anxious about their finances and hence, strive to find ways to improve their understanding of issues that have implications on their financial life. Again, individuals within the higher income bracket are more likely to have the means to

pursue programmes aimed at improving their knowledge in financial matters to be able to properly manage their finances (Filipiak & Walle, 2015; OECD, 2017).

Although positively associated, marital status did not have a significant impact on financial literacy ( $\beta = 0.067$ , and  $p$ -value = 0.145). This means that whether or not an individual is married does not affect his level of appreciation of financial matters significantly. The age of the respondents was found to be insignificant and negatively associated with the level of financial literacy ( $\beta = -0.061$ , and  $p$ -value = 0.339). This result is contrary to the findings of Lusardi and Mitchell (2011); Filipiak and Walle (2015); Garg and Singh (2018) that older individuals tend to be more financially literate than younger people.

## Conclusion

The study examines the concept financial well-being among professional footballers and the effect of financial behaviour and financial literacy on financial well-being. The study employs the structural equation modelling technique to analyse data collected from professional footballers in Ghana. The result from the structural analysis suggests that the level of financial literacy of footballers has important implications for their financial behaviour. As observed from our analysis, professional footballers who are financially literate tend to save more of their earnings and also have a greater tendency to invest than their peers. Our findings also suggest financial behaviour has a positive effect on the financial well-being of footballers. Thus, we find very strong support for the argument that responsible financial behaviour, proxied in this study by savings and investment behaviour, is key to attaining financial wellness in life.

The findings from this study offer significant contributions to the research community, practice, and policy. We show from our analysis some of the practical ways that can be

pursued by stakeholders within the football community to improve the financial well-being of professional footballers. First, efforts to enhance the financial well-being of footballers can begin with investing in training programmes to make them financially literate. Second, it will be useful for football clubs to also engage the services of financial coaches who will be responsible for providing practical guidance to footballers during their active playing days to help shape their financial behaviour. Given that the financial well-being of a person is closely associated with psychological well-being (Owusu, 2023), such initiatives will have a positive effect on the performance of players on the field. For future researchers, the study presents new insights that provide baseline information on financial literacy, financial behaviour, and financial well-being of footballers from a developing country perspective.

Despite its contributions, this study has some limitations. First, all the measures used for data collection are self-reported which presents the risk of respondents misinterpreting questions or giving socially desirable answers. We also acknowledge that there may be other factors that impact an individual's financial well-being not examined in this paper. Lastly, caution should be taken in generalising the findings of the study as we focused only on professional footballers from the Ghanaian Premier League. The situation in other contexts may differ given the distinct geographical, social, and other differences present.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

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