

EEA Investors' Group : Working Paper 7B

INDEPENDENT REPORTS ON EEA LIFE SETTLEMENTS FUND

INTRODUCTION

This Working Paper summarises annotated highlights from three independent reports related to the EEA Life Settlements Fund. These reports were published by the University of St Gallen (Switzerland) in March 2014 and students from the University of Warwick Business School (UK) in September 2014.

A companion Paper WP7A is available from www.EEAInvestors.com and covers an analysis of the EEA portfolio and management by the EEA Investors' Group covering the period since inception in 2005 to September 2014 and into the future run-off period.

Disclaimer : The Reports mentioned in this Working Paper contain the conclusions, opinions and analysis of the relevant authors. Medley systems Ltd is solely responsible for the compilation, annotation and summarization of the selected extracts. The full reports can be accessed via the "Links" section at www.EEAInvestors.com

If you only have the Summary pages, the full WP7A and WP7B documents can be downloaded from the "Working Papers" section at www.EEAInvestors.com

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Declarations of Interest

This Working Paper is published by Medley Systems Ltd (MSL), the designated co-ordinator of the EEA Investors Group. No payment has been sought, paid or received by MSL, or any of the named sources in relation to this WP or the Group's activities.

The Author has an investment in EEA shares, currently through the Meteor Senior Life Settlements Fund.

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1. Background

During our assessment of the EEA Life Settlements Fund for WP7A, several questions and issues kept arising in relation to the valuation methods, risks and sensitivities of life settlement funds in general and the EEA Fund in particular.

The EEA Board repeatedly claims that it operates the fund in accordance with the Scheme Particulars and that investors have signed up to these particulars when they decided to purchase their shares. These statements are over simplistic because :

- a) The Scheme Particulars do not specify much of the detail about valuation methods, risk assessment and sensitivity of the Fund to various parameters, and many of the key factors used in the valuation methods are at the discretion of the Directors, together with the responsibility to periodically review or revise the factors.
- b) The many retail investors who purchased their shares via platforms, trustees or pension wrappers did not receive copies of the Scheme Particulars, and did not see or sign the undertakings on the EEA application / dealing forms. They were therefore not in a position to understand the various factors, risks or methods involved and relied almost solely on the advice of others and the marketing / promotional materials published by the Fund Manager.

Even with the information in the Scheme Particulars, the Life Settlements sector is very complex, and has itself been evolving from simple beginnings in the HIV environment of the 1990s to the more complex industry and regulatory environments of today, relying on the Boards and the Fund Managers to make appropriate improvements to their methods and techniques along the way. Retail Investors were generally not in a position to make these assessments for themselves or to grasp the changes recommended as the industry evolved.

2. University of St Gallen (Switzerland) (Appendix A) alexander.braun@unisg.ch

The Institute for Insurance Economics (IVW) is an innovative research, training and consulting institute of the University of St. Gallen in conjunction with the Swiss Insurance Association and AA Partners (Zurich). The Institute's four main research areas are: General Management, Insurance Marketing, Financial Services and Integrated Risk Management.

The Working Paper 143 referenced in Appendix A was published by the Chair for Risk Management and Insurance in March 2014, and compared the operations and valuation methods for eleven Life Settlement funds, including EEA, together with suggestions for Improvements. The following extracts are highlighted in Appendix A.

Summary and Conclusion (Section 5)

ō The most striking result is that a majority of asset managers seem to substantially overvalue their portfolios relative to the prices of comparable transactions that have recently been closed. Drawing on market-consistent estimates with regard to medical underwriting, it is possible to trace back the observed discrepancies to inadequately low model inputs for LEs and discount rates. The consequences are a dissimilar treatment of investor groups in open-end Fund structures as well as an unduly high compensation for managers and third parties.

ō Against this background and taking into account that a number of fraud schemes have partly eroded investor trust in the industry, regulators, auditors, advisers, and, in particular, Fund managers should consider a radical change in valuation practices.

ō It is hard to imagine the long-term persistence and potential further growth of the life settlement asset class in the absence of honest attempts to estimate fair values of policies and portfolios.

Valuation of Life Settlement Assets (Section 2.4)

ō the essentially obsolete deterministic approach assumes that death occurs exactly at the end of the LE (Bayston et al., 2010). A probability-weighting of cash flows does not take place. While being straightforward to understand and implement, this basic model does not take into account variation around the LE. As a corollary, it may significantly misestimate the value of a life settlement contract and is thus not appropriate for fair value measurement (Soomro and Zass, 2012).

... the probabilistic or actuarial approach was developed to overcome the weaknesses of the deterministic method and represents the current market convention. Instead of assuming a fixed time of death, this method relies on a mortality table that matches the insured's age, gender, and health status (Lubovich et al., 2008).

Comparison of Fund Valuations with Market Values (Section 3.3)

ō Funds 1, 5, and 9 exhibit reasonable figures with regard to their age brackets. All other Funds [incl EEA], however, seem to cling to valuations that are at least twice as high as one would expect based on the current market environment. While one might argue that the portfolio valuations reported by Funds 2, 7, 8, and 10 are still acceptable, those of Funds 3 and 4 – as well as of Funds 6 [EEA] and 11 – undoubtedly indicate that something is not right.

Potential Reasons for the Value Deviations (Section 3.4)

ō the fact that Fund 6 [EEA] is known to still employ a deterministic valuation model may at least partly explain the deviation of its portfolio value from the current price levels of comparable transactions.

ō From Equation (1) we know that the value of a life settlement rises for shorter LEs (higher mortality rates). Thus, it could be argued that the portfolio values of certain Funds exceed current market levels

simply because they mainly hold policies of insured individuals with above-average health impairments.

ō Funds enjoy a large amount of discretion, even when relying on a market-driven LE input for their valuation models.

ō Funds 3, 4, 6 [EEA] , and 11 exhibit average LEs that lie well below the current market levels in their respective age brackets.

ō *Taking these considerations into account, it is likely that the extraordinarily high portfolio valuations of Funds 3, 4, 6 [EEA] and 11 ... are attributable to the use of inadequately short LEs. In other words, the managers seem to have alarmingly overvalued their life settlement portfolios.*

ō To further underline this argument, the accuracy of the LE information provided by Fund 6 [EEA] is assessed based on the A/E ratio for the two years between February 2011 and February 2013. ō If the Fund's LE estimate had been correct, 50% of the policies would have matured and approximately \$753m in death benefits would have been paid out within less than two years. However, in fact only \$270m in death benefits was disbursed up to February 2013, implying a gap between expected and actual payments of around \$480m. This corresponds to an A/E ratio of only 36%, which again indicates a severe underestimation of the LE and a blunt exaggeration of the portfolio value.

ō There are two main reasons why the portfolio LE and in turn the A/E ratio are so low. On the one hand, it is a well-known fact in the life settlement industry that medical underwriting was generally too aggressive in the past and had to be revised several times. Consequently, if an asset manager did not adjust his LE estimates after such market-wide shifts, the average LE today will be too short. On the other hand, the health status of the insureds is often subject to unexpected changes over time, which can only be detected through regular re-underwriting.

Consequences of Mispriced Assets (Section 4.1)

ō Our empirical results indicate that a number of life settlement Funds exploit the leeway inherent in the current accounting guidelines to overvalue their assets. This has several important implications for market participants. Firstly, investors must expect to be treated unequally.

... Secondly, Fund managers and third parties who are remunerated based on the assets under management earn more than they should. Similarly, when life settlement portfolio valuations are decoupled from actual market prices, managers may artificially appreciate the assets and collect performance fees based on phantom gains. Thus, the prevailing fee structures in the life settlement industry provide a clear incentive to inflate portfolio values.

... Lastly, to avoid liquidity issues, Funds with tremendously overvalued assets will be forced to halt redemptions if those exceed new subscriptions for a certain amount of time. The reason is that they cannot simply sell policies for the values reported in the financial statements.

Suggestions for Improvement (Section 4.2)

ō To avoid further conflicts of interest, however, one would need to ensure that the market-consistent inputs come from independent third-party data providers instead of life settlement firms or the Funds' own records. Thereby, one could increase the comparability and transparency of valuations and reduce the dependence on subjective assumptions.

ō Fund managers currently have an incentive to drastically shorten LEs over time in order to achieve a steep appreciation of the portfolio after the purchase. This issue could be mitigated through improved disclosure requirements for the life settlement industry. In particular, Funds should be obliged to report LE figures, IRRs, actual death rates, and A/E ratios for their portfolios on a regular basis.

ō investors, actuarial advisers, custodian banks, and auditors could easily verify the portfolio values reported by the Funds. Moreover, if certain medical underwriters refuse the publication of their A/E figures, managers should be required to inform their investors about this fact. As a corollary, it would become much more difficult to employ inconsistently low LE estimates and discount rates, and products that rely on non-transparent medical underwriting will be hard to sell.

ō Regarding the issue that today's fee structures incentivise asset managers to manipulate portfolio valuations, it would be reasonable to use realized earnings such as death benefit payments instead of Fund volume or NAV as a basis for compensation. Additionally, the transparency with regard to fee schedules and actual earnings of the Fund managers should be improved to overcome inappropriate incentives.

3. University of Warwick Business School (WBS) (Appendix B)

In April 2014, a private EEA investor suggested to the University of Warwick Business School (WBS) that they might consider EEA as a suitable subject for a Case Study by one of their MBA or Finance students. A briefing note was drafted (see Appendix B) and interviews carried out with the eight candidates who applied. Two students were selected to carry out two separate studies (based on their own views and interests) and they started their work in May 2014, leading to completion and the release of their Reports in August and September 2014. The sponsor asked the EEA Investors Group to provide copies of various EEA documents (Annual Reports, Fact sheets etc) as required and to review the final draft Reports before release. Neither the sponsor nor the Group took any part in the conduct of the Studies and took great care not to jeopardise the independence of the work. The authors and WBS have authorised the EEA Investors Group to include the annotated extracts of the Reports within this WP and to reproduce the WBS logo.

3.1 Jing An (Appendix C) fm13ja@mail.wbs.ac.uk

EDUCATION

MBA Exchange Student, McCombs School of Business, University of Texas at Austin 09/2014

University of Warwick, MBA with Dean's Scholarship 09/2013 – 08/2014

Key Modules: Strategic Advantage, Advanced Corporate Finance, Investments & Risk Management

The Chinese Institute of Certified Public Accountants, Certified Public Accountant 01/2011 - present

Sun Yat-sen University (SYSU) 09/2004 - 07/2009

BSc Biosciences (3.9/5.0) & BBA Accounting (3.8/5.0)

Winner of Excellent Student Scholarship in each record year in both university and school level

EXPERIENCE

Amway (China) Co. Ltd., Accounting Supervisor 09/2012 - 08/2013

One of the world's largest direct selling companies with annual sales of more than RMB27 billion

KPMG Huazhen (SGP) Guangzhou Branch, Assistant Manager 10/2009 - 08/2012

Obtained professional qualification (CICPA) within 2 years, which normally needs 4-5 years

The following extracts are highlighted in Appendix C.

Conclusions

ō Through an all-around examination on the Fund's marketing, valuation, portfolio performance, fee structure and Corporate Governance, I believe that the investment in Life Settlements is highly risky and unsuitable for investors without sufficient knowledge about the industry.

ō Sensitivity analysis shows that life expectancy is the most sensitive variable for the NAV.

ō In my opinion, the open-ended structure is unsuitable for illiquid assets like Life Settlements without reliable and acknowledged valuation method. As a result, the open-ended structure of the Company makes it vulnerable to a deluge of redemption requests following unexpected adverse news.

o Even though a wide range of risks are disclosed in the prospectus and Annual Reports, low risk is widely advertised as a selling point. The risk warnings seem like a tool for the Manager to minimise litigation risks instead of a reflection on the Fund's risk management.

o Considering the importance of valuation in the Life Settlements transaction, pricing model should be carefully examined with independent advisors involved.

o Independence of the Board of management should be improved with conflicts of interest being handled carefully. The structure and operation of the Company as an Open-ended Fund should be re-examined.

Inconsistent valuation policies (Section 5.2.1)

o Inconsistencies and changes in valuation methods applied in each year have been observed in the Annual Reports. o the valuation of investments is calculated on a discounted cash flow basis using the estimated future cash flows of each policy to the expected maturity date of the policies, and the discount rate applied is an appropriate risk-free rate of 5% per annum. This oversimplified description of the valuation method has not revealed the underlying assumptions and detailed procedures regarding the determination of expected life expectancies, applied mortality tables and cash flow patterns.

o Moreover, compared with the Company's targeted return of 9-10% p.a., the discount rate of 5% seems too low and leads to a significant risk of overvaluation of the investment assets,

o Overall, the pricing method seems to be a deterministic approach, which ignores the distribution of life expectancy and makes oversimplified estimates to determine the Fair Value of investments.

o Though the pricing method seems to have improved to a pseudo-actuarial basis, it is still questionable to use the past two years' discount rates to estimate the discount rate for future cash flows, since there is no guarantee that the current return on investment can be sustained especially in an emerging market full of uncertainties. Furthermore, the current ROI is also dubious with obscure calculation processes and lack of factual proofs because few policies had actually reached maturity at that time.

o This is effectively a transition (in progress) from a deterministic valuation approach to a more probabilistic approach, which is the more commonly used valuation method in the actuarial and Life Settlements sectors. While this transition indicates an increase in credibility of the valuation of NAVs, the huge amount of devaluation booked in 2012 infers inflations in the NAV growth, fee arrangements and share redemption prices in the previous years.

o The more recent valuation approaches are increasingly sophisticated and well-founded. On the other hand, the inconsistencies of the calculation basis and valuation assumptions make it difficult to compare the asset values and Company performance over the past few years.

o Sensitivity analyses in the Annual Reports of the Company show that changes in estimated LEs have the most significant impacts on the NAV o and a two-year extension / reduction in the life expectancy can decrease / increase the NAV by more than 40%. On the other hand, comparing a wide range of discount rates used in calculating the NAV from 8% to 19%, a 1% change in sensitivity analysis seems insufficient and so does the credibility of the DCFs.

Evaluation of a sample Life Settlements (Section 5.2.2)

o Among the variables, LE is most sensitive to the NPV of Life Settlements investment, and only one year extension in the base value more than halves the NPV. Most importantly, LEs provided by different providers vary widely with a range longer than one year

o Further analysis on the break-even of NPV and initial purchase price shows that Internal Rate of Return (IRR) varies from 6% to 20% when LE changes from 6 years to 4 years. Additionally, the wide range of discount rates used by the Company makes the NPV fluctuate significantly. Overall, the value of an investment in Life Settlements is quite sensitive to all these assumptions with high uncertainties.

Impacts of revaluation on the NAV calculation (Section 5.3.1)

o A breakdown of the net income also shows the importance of revaluation gains to the profitability of the Company. o even though the net income from matured policies increased year by year, doubtful unrealised gains account for 50% - 70% of the total net income during the years 2007/08 to 2011.

o Theoretically, the increase of discount rate will lead to a negative adjustment on the asset value, but no specific adjustment is notified in the Annual Report. One possible explanation is that the LEs might have been reduced in the revaluation.

... no sufficient evidence could support a reduction in the LEs. Similar problems exist in the following years revaluation. And a thorough review of LEs conducted in 2013 shows that the average LE of outstanding policies (56% of the total policies purchased) is 95 months, significantly higher than the previous estimations of around 45 months o Most importantly, the unreasonable changes in valuation policies, unreliable NAV pricing and adverse mortality experience since 2011 are also the main reasons for Ernst Young to qualify the 2011 account.

Expense and fee analysis (Section 5.3.2)

o Basically, expenses can be divided into four types . Valuation Based Fees (VBE), %Connected+ Charges, Expenses Paid to Partners and Other Operating Expenses. Firstly, the highest VBE/NAV of 5% happened in 2011 (2010: 3%), when the NAV enjoyed a minor decrease (2%) with a similar number of outstanding policies compared to the figure in 2010 (2010: 679, 2011: 674). Moreover, in the 2011 Annual Report the Company first disclosed that 259 (or 38%) of outstanding policies were past their projected life expectancy (87 of the policies were more than 12 months past), representing more than 20% of the total Net Death Benefit of policies purchased. Normally, the prolonged LE would cause a reduction in the NAV, thus negatively affecting the VBE. These facts make it hard to justify the opposite increase in the VBE/NAV ratio for 2011.

o In order to achieve 5% VBE/NAV ratio, the projected ROI is 12.53%. However, considering the significant impact of revaluation on the Fair Value of investments, this seemingly decent annualised ROI is not well-founded. Again, taking the Fair Values of investments in 2010 and 2011 for example (these two years have similar asset scales as discussed earlier), statistics o show that revaluation effect almost doubles the growth of Fair Value of investments from 7% to 16%.

o The interests of the remaining shareholders appear to be irreparably damaged in comparison with those who redeemed before the suspension at the end of 2011.

o to put it another way, whether the design of the calculation bases have potentially incentivised the management of the Company to overvalue the NAV.

Liquidity analysis (Section 5.3.3)

o In these circumstances, the cash reserve is unstable since maturity date of policies is unpredictable and any potential disposal price of policies may be unreasonably low at short notice in an illiquid market. Thus, the Company might fail to pay the ongoing premiums and maintain a normal operation.

ō Also, the Company lacks a stable and adequate portion of liquid assets like a cash reserve account as suggested by A. Braun et. al. (2012). And whether the measures that the Company adopts to protect itself indeed harm the interests of investors need to be carefully examined.

Structure, responsibility and behaviour of the management (Section 5.4.1)

ō Considering the complexity of Life Settlements transactions, it is unclear how four Directors among which three are multitaskers could discharge their duties to investors with appropriate transparency and integrity. Further, conflicts of interest are unavoidable while new Directors are appointed by the existing Board and have the power to decide the payments of services (and their own fees) without external supervision or investor agreement at the General Meetings of the Company.

ō Another noticeable fact is the movement of A J Simpson's shareholdings. As the only Director holding shares in the Fund, A J Simpson dramatically increased her investments and quickly redeemed in 2010 when the NAV reaches its historic peak and just before the suspension of the Fund. Ironically, the risk warnings stated in the Offering Memoranda advocate that investments in the Cells should be considered as medium to long term investments.

Transparency of financial reporting and investor communication (Section 5.4.2)

ō Any unwillingness of a manager to discuss and disclose terminal value pricing assumptions should be cause for concern. And an extremely disappointing and disturbing fact to investors is that the Company is consistently reluctant to provide basic information and comment on adverse news and events.

ō Major issues raised by Ernst Young were also related to the valuation method, the credibility of assumptions on LEs and discount rate, observed life extension of many insureds, and a lack of evidence concerning changes to the valuation factors for policy or NAV calculations during the year. These alarming findings are consistent with my analyses and examinations conducted so far.

Remuneration and fee arrangements (Section 5.4.3)

ō the performance and management fees are not well-justified especially during the suspension period. Moreover, no official documents explain how to determine the calculation bases of fees, and the Company lacks a formal voting or approval process where independent parties or investors are involved regarding major management decisions and the remuneration or fee arrangements.

ō In order to align the interests of Directors, Fund Manager and investors, some measures suggested can be taken such as soundly based hurdle rates, high water marks, risk-adjusted performance fees, and requiring the Directors and Managers to invest in the Fund with a lockup period

Risk management and disclosure (Section 5.4.4)

ō many promotional documents of the Fund highlight the feature of low risk and strong, consistent returns, and emphasise the large scale of this untapped market. But these descriptions are not objective and comprehensive

ō The FSA Bonzi-like characterisation further reinforces the high potential risk. Also, the so-called low risk is contradictory with the huge amount of risk disclosures in the Annual Reports and prospectus.

ō The Annual Reports describe a large number of risks together with their potential impacts

... In contrast, eighteen types of risks are illustrated in the Offering Memorandum, covering almost all aspects of the risks mentioned earlier. However, the risks are just randomly listed and not well-

organised. Secondly, the explanation of risks is descriptive with few, if any, countermeasures provided. Most importantly, the Manager has not evaluated the significance of the different types of risks and put them in a more readable order. It seems as though these risk warnings are just put there by the Manager to minimise litigation risks if the Fund was to underperform and be sued by investors or their advisors for damages.

Pricing Method (Section 6.2)

Since the premiums and death benefit are provided by the issuing carrier, and IRR is a predetermined factor, the most uncertain variable involved in the pricing is the insured's life expectancy.

Life expectancy calculation (Section 6.2.1)

The deterministic method utilise the mean life expectancy or more conservatively assumes a life expectancy estimate beyond the mean life expectancy. Therefore, one of the great disadvantages of this method is ignoring the distribution of life expectancy. Darwin M. Bayston et. al. (2010) believe this method is significantly flawed because people with longer LE could cause significantly greater premiums and delay the payback of death benefit. Furthermore, deterministic valuation may ignore the cost of capital, thus leading to an undervalued future premium liabilities and a lower actual ROI compared with priced ROI.

Darwin M. Bayston et. al. (2010) mention two sources of underwriting errors stemming from choosing an inappropriate base table and misjudging the health impairments. Further, this approach may utilise overly-aggressive life expectancies and mask tail risks when mortality assumption is not appropriate.

One recent study conducted by Sarah Affolter et. al (2014) reports that a majority of Fund Managers seem to overvalue their assets and discretely use low model inputs for LEs and discount rates. Another striking finding is that two largest US medical underwriters - 21st Services and AVS - are inclined to issue shorter LEs compared to the market averages, and both of them were appointed by EEA LSF before 2013.

Mortality assumption (Section 6.2.2)

Since the average current insureds of EEA LSF are in their 80s, LEs are probably underestimated considering the disappointing A/E Ratio.

Teresa R. Winer (2009) questioned the rationality of most commonly used mortality tables, and commented that mortality assumptions at older ages are often set too high even based on the most conservative 75-80 Table, in order to make the policies look more attractive to the buyer. Mohoric, E. & Kinney, R. O. (2008) considered that Life Settlements mortality might not follow the trend in insured lives of the life insurance industry, because the policies in a Life Settlements portfolio are basically impaired lives. If the mortality multiplier has been added to the basic table, the mortality curve should be less steep for impaired lives.

Katt, P. C. (2008) argues that many buyers are actually intermediaries who enjoy the hidden fees and commissions and leave institutional and individual investors to bear the brunt of exaggerated investment yield claims. Braun, A. et. al. (2012) question the diligence level of Life Settlements Providers (LSPs) with regard to the fact that their prepaid fees usually depend on number and volume of policies instead of long-term investment performance. To illustrate, in order to increase the chance of winning bids, LSPs may purposely choose medical underwriters that issue aggressive life expectancy estimates to lower the offer price. After that, they can resell these policies to the Fund and make the final investors bear the risk of misstated life expectancy estimates. Similarly, in the case

of EEA LSF, it is the remaining investors who absorb additional costs for the inflated portfolio performances and fee charges based on discretionary valuation variables.

Valuation risk (Section 6.5.1)

• First, the key factor of pricing calculation is the insured's Life Expectancy (LE), a variable that people will never know until the insured's death.

• Perera, N., and B. Reeves (2006) attribute the mispricing risk of a life policy to two types of errors - model errors and mis-estimated life expectancy.

• Second, the discount rate used to calculate the net present value of expected future cash flow is usually the internal rate of return the LSPs aim to achieve through the investment, and might be a function of cost of capital (Dan Zollars et. al., 2003).

• Even worse, sometimes the IRR is determined by the pre-supposed net present value of future cash flow with a manipulated life expectancy. The great number of participants • from different interest groups involved in a Life Settlements transaction definitely increases the valuation risk, and the proprietary valuation methods could only make matters worse and unknown to the investors.

• In an empirical analysis on the performance of Open-end Life Settlements Funds, Braun, A. et. al. (2012) also explore the relation between the Fund performance and the applied valuation method, and suggest that the almost linear growth trends of the observed Funds • are probably a by-product of the accounting-oriented valuation methodology implied by the *Investment Method*. They believe the application of the Fair Value Method would probably lead to a more volatile return curve, and warn that this method might induce Fund managers to frequently change their valuation estimations to smooth returns or re-value Fund shares at reduced prices when extensive redemptions are required by investors (Braun, A. et. al., 2012). Furthermore, valuation risk could be one plausible explanation for the sudden collapses of certain funds since 2008 (see Figure 29). These findings make the linear growth of EEA LSF suspicious because the Fair Value measurement is applied with constantly changing valuation assumptions.

Longevity risk (Section 6.5.2)

According to Perera, N. et. al. (2006), longevity risk can be viewed as a systemic risk that the insureds live longer than originally expected. • The consequences would be even more serious if longevity risk occurs in a systematic form, that is, the life expectancies in the entire portfolio are simultaneously prolonged.

• Longevity risk might originate from the inherent inaccuracy of mortality tables. Even though these base tables are updated periodically, the records so far indicate an increasingly longer life expectancy for all groups of people •

• Another challenge is the relative lack of records and experiences in the LE estimates specifically for senior groups and impaired lives, thus the gap between the observed actual mortality and the expected figure might be significant as shown in the A/E Mortality Ratio for 80 -89 as low as 61.6%.

• Longevity risk is also associated with medical advancement. For instance, a significant discovery of a cure, an improvement in disease management and reduced medical costs for certain treatments could affect the life expectancy estimates, thereby adversely reducing the profitability of Life Settlements.

• Longevity risk would also come from unethical behaviours of medical underwriters who want to steadily expend their influence in the market (Braun, A. et. al., 2012) and agents who want to increase the attractiveness of a Life Settlements and deliberately underestimate life expectancies.

o It is also possible that Life Settlements Funds would seek to obtain their LE estimates from LEPs who are known to err on the low-side for particular impairments or types of (e.g. older) insureds. Just as mentioned in Section 6.2.1, it is the case of the Company that its two previous LEPs seem to provide below-average LEs.

Liquidity risk (Section 6.5.3)

o Compared with new subscriptions, redemptions are more likely to be triggered by some adverse news and cause a ripple effect that would lead to damaging consequences.

o Furthermore, defaults on the ongoing premium payments are more likely to happen in a distressed Life Settlements Fund predestined to collapse.

Portfolio risk (Section 6.5.6)

o Because Life Settlements Funds always seek high face value policies, a majority of selected policyholders are affluent people that can afford better health care and illness management and are inclined to have a longer life expectancy than a less affluent person with similar impairments. If these underlying factors are not considered when selecting the target policies, an overvaluation risk of the whole portfolio can materially erode investment returns. Insurers and LEPs must be very careful to apply anti-selection and reverse anti-selection screening to identify such policies and risks, especially for companies like EEA LSF holding policies with relatively high average Face Values o

o The prudence level of the Life Settlements Funds should also be considered in terms of choosing valuation method, making investment decisions, maintaining portfolio performance and evaluating relationships with partners.

Regulatory risk and tax legislation (Section 6.5.7)

o Darwin M. Bayston et. al. (2010) summarise two essential regulatory factors in Life Settlements transactions . insurable interest and contestability period. An **insurable interest** is required at the inception of the insurance policy to prohibit Stranger-Originated Life Insurance (STOLI), a practice that initiates a life insurance policy under fraudulent pretences or with the intention of quickly selling it to third-party investor.

o Katt, P. C. (2008) mentions that some Life Settlements agents try to persuade wealthy seniors to become insured for the sole purpose of selling the life insurance policies later. Obviously, these manufactured policies with potentially irrational pricing and fraudulent practices would adversely affect the development of Life Settlements market. Considering the average Face Value of US\$2.46 million held by the EEA as of 31 December 2013, investors should be aware of the additional risks associated with the irregularities mentioned above.

o Steven E. Chancy et. al. (2010) examine the risks associated with the Senior Life Settlements (SLS) credit facility provided by certain financial institutions and classify the Life Settlements transactions as high-risk investments. They recommended that bank and securities regulators should pass additional Federal and State laws on the Life Settlements market and intermediaries involved.

Fund Structure, Governance and Transparency (Section 6.6)

o Clearly, without a solid base of Corporate Governance, the adoption of an Open-end structure in EEA LSF is problematic and controversial with significant liquidity risks o

o The valuation risks combined with conflicts of interest can cause moral hazards and harm investor interests. Clearly, similar problems can exist in Corporate Governance of Life Settlements Funds including EEA LSF.

ō Some Fund Managers claim to invest personal wealth into their own funds to justify the alignment of interests. However, their generous performance fees are still questioned because their offshore accounts are difficult to verify under certain confidential agreements, and managers often receive larger positive returns and are immune to significant losses with a fixed-rate management fee (Gregoriou and Christopherson, 2005). Additionally, some managers of underperforming funds might take additional risks and short-term actions to achieve targeted returns for a limited period.

ō To improve the Corporate Governance of Hedge Funds, several measures are proposed by Gregoriou and Christopherson (2005) including an industry-wide incentive scale for performance fees, lockout of the Managers' personal wealth, sound Corporate Governance guidelines, and risk-adjusted performance fees based on the modified Sharpe ratio, which is calculated by dividing the excess returns by the modified value at risk.

ō Broadly speaking, M. Cremers et al. (2009) find a positive correlation between the higher director ownership and superior Mutual Fund performance which is driven by the improved alignment incentives. Further, B. N. Lehmann (2006) advocates a trade-off analysis on the burden of regulation and the reduced performance failures. Helen Avery (2008) points out the importance of an effective independent board responsible for protecting and maximising the investors' interests. These recommendations could also provide clues to address the Corporate Governance issues of the Life Settlements Fund sector.

ō Darwin M. Bayston et al. (2010) believe that %Since Inception Internal Rates of Return+(SI-IRR, or money weighted return) is a more suitable performance measurement for the investors' return compared to a time-weighted return, which is normally used to measure the performance of portfolio managers. Additionally, they advocate the use of industry standard mortality tables, detailed cash flow documentation, independent asset valuation with stated assumptions, and periodical review of actual life expectancy to promote appropriate disclosures.

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EDUCATION

Warwick Business School, University of Warwick Sep 2013- Sep 2014 MSc Finance
Investment Management, Financial reporting & Statement analysis, Advanced Corporate Finance

CFA Level I - Dec 2013

Department of Economics, University of Birmingham Sep 2011- Jul 2011

-BSc Money Banking and Finance (2:1)

Econometric Methods, Economics of Corporate Finance, Economics of Financial Markets

Research Institute of Tsinghua University Shenzhen Intl. Ed. College Sep 2010- Jul 2011

-BSc Accounting and Finance (75/100)

Financial accounting, Quantitative methods A & B, Fundamentals of Corporate Finance

EXPERIENCE

YEC (Young Elite Camp), Standard Chartered Bank (China)

CMB (China Merchants Bank) Wealth Management Assistant, Intern

Participant - Bloomberg Investment Competition. Ranked 11th in final UK league table.

Managed personal equity portfolio for three years generating a return of 8% p.a.

Member of Warwick Finance Society 2013

Modelled the volatility of Shanghai Composite Index - forecasted the volatility for 2013 & 2014

Project on the valuation of UK food ingredient company Tate & Lyle

The following extracts are highlighted in Appendix D.

ō As emphasized by (Braun et al., 2012), the valuation error of the policies would significantly affect the investors' return. The Fund would incur large policy acquisition costs as a result of an overestimated valuation. An underestimated life expectancy would increase the ongoing premium costs for keeping the policies in force for longer.

- o In short, the fundamental issue is how often and to what extent the Fund would overestimate or underestimate the LE of the policies.
- o The complexity arises from the open-end structure of the investment and the Fund's valuation techniques.
- o Additionally, the NAV was also used as a measurement for promotional materials and thus is subject to potential misrepresentation. Thus, both usages of the NAV are prone to incentive-biased manipulation.
- o Even if the dealing NAV is calculated following some formula, which is unlikely to be the case given the extent of discretion given to the Fund's Directors, SI-IRR is a better representation of the Fund's performance than the change in NAV.
- o However, when life settlement providers are purchasing policies in the secondary market, they normally use a probabilistic approach to value the policies and bid a price based on this valuation.
- o Due to the young age of the asset class, the other challenge is that not enough past history can be used to sufficiently understand all the possible risks. The inputs used for pricing the assets are not observable variables obtained from an active market and thus the Open-end structure adversely impacts the Fund's performance. On a portfolio management level, the diversification is limited given the life policies' universal risk exposure to systematic life expectancy.
- o However, risks that are yet to materialise are often overlooked. One possibly mis-estimated risk is the valuation risk.
- o As stressed in Bayston (2010), the LE estimate is the input of the greatest uncertainty with regard to the NAV. In addition, longevity trend risk is a major risk element of the life settlement market. Liquidity risk is another overlooked risk when determining the fund's NAV.
- o However, this precedent raises the awareness of the possibility of misrepresenting the Fund's life expectancies. This representation would directly mislead investors to trade their shares at a false price.
- o the Investment Method reflected only the historical purchase costs and interim costs of investment (e.g. the premiums paid to keep policies in force) in the life policies, rather than the policies value as would have been priced in the secondary market.
- o With regard to life expectancy estimates, Best, A.M., (2009) highlighted that the figures provided by different medical underwriters for the same lives can vary substantially, implying a potential mis-estimation.
- o When doing the comparison between individual funds, the sudden collapse in the NAVs of three funds is observed through the maximum drawdown. This again highlights the possible overlooked extreme risk in life settlement funds.
- o The idea behind the deterministic approach is that it is a valuation based on discounted cash flows where the blended LE was assumed to be the precise date of death.
- o Following the publication of the 2011 Accounts, the EEA Directors changed the methodology for valuation of the life insurance policies to partly reflect the emerging experience in the Fund and to recognise that the experience is not yet fully credible.
- o Given that the valuation is largely subject to the accuracy of the underwriters' LE estimate, any error would lead to a significant change in the valuation. This risk is emphasized in (Braun et al., 2012) stating that the most severe risk for life settlements is the valuation risk.
- o The Probabilistic Method better recognises the distribution of LE and adjusts the projected cash flows. This smoothed valuation is therefore subject to less error than that of the Deterministic Method.

o Despite the disclosure of this risk, the discretion of assigning a 72% weight to the zero credibility valuation for the year 2011 is certainly open to criticism.

o Thus, it should be expected that a systematic mortality review would lead to substantial change in the Funds NAV.

o Low volatility is often regarded as indicating low risk. Volatility can be a measure of risk for actively traded securities. However, volatility can be a misleading measure of risk of the life settlement asset class, which has not been securitized. More importantly, even if we only look at the volatility as a measure, by using variance in statistical sense, it could not even be as low as claimed.

... But the driver of the Funds volatility is the correlation between individual policies, and should be an investors concern when making his or her investment decision. An obvious common characteristic of the policies is the systematic life expectancy.

o As long as the Fund is at the stage in which the purchase of life policies exceeds the value of polices matured, a growth pattern would be presented.

o If the Fund would use the Fair Value method, the Funds NAV (and dealing price) would present a flatter pattern instead of a linear growth one.

o Clearly, the valuation is sensitive to the underlying IRR assumption.

o particular attention is drawn to the inappropriateness of using the deterministic approach..

o Further investigation of the EEA Fund should give some consideration to the liability side of the vehicle. Issues such as whether the fee structure is incentive compatible and its role in determining the Funds NAV should also be analysed.

o The Open-end structure might induce investors to value the Fund on a perpetual basis, however ongoing redemption and subscriptions contain a risk of insolvency and thus a liquidation valuation should also be conducted periodically.

o Volatility is not the whole picture of the Funds risk and the specific downside risks should also be measured.

o More up to date and comprehensive valuations should be conducted more frequently.

o From the IRR analysis, we can see that SI-IRR provides a more prudent ongoing measurement for the investment performance and it is in this respect that it is advantageous over the more normal IRR at purchase.