

INSTITUTE AND FACULTY OF ACTUARIES

CP3 – Communications Practice Scenario Material

April 2018

Instructions for candidates

You are provided with this advanced information to enable you to digest it in your own time, and not under exam conditions. Please note that this is an exam to test your ability to communicate technical information to a non-technical audience. It is not a test of your knowledge of any technical actuarial knowledge or skills. As such, any technical actuarial information or techniques that you need to answer the question will be provided to you. You do not need to spend time revising other subjects or looking for further information on the topics covered in the paper.

This document consists of **8** printed pages and **0** blank pages.

Industria Pension Scheme (IPS) is a large Defined Contribution pension scheme which manages retirement funds on behalf of the employees of The Industria Corporation. Participation in the scheme is mandatory for all employees, and a monthly contribution of 10% of gross salary is split evenly between the employer and employee. Individuals no longer employed at The Industria Corporation are required to exit the scheme, and are provided with several options of where to transfer their accumulated funds.

Trustees of *Industria Pension Scheme* are appointed in equal proportion by the sponsor and members, and are responsible for setting the investment principles of the assets held. The chairman of the Trustees is a proactive individual who constantly seeks new opportunities to improve the scheme's investment performance.

You have been provided with the following information:

1. Selected information relating to the *Industria Pension Scheme*
2. Slides from a recent Cryptocurrency analyst presentation which a colleague attended, together with accompanying notes.
3. Excerpts from *Industria Pension Scheme's* most recent investment mandate.

1. Selected Information for the *Industria Pension Scheme*

Age Distribution

The table below indicates the funds invested per age band of all current members. Employees at *Industria* have a compulsory retirement age of 65. This may be extended up to a further 10 years where the individual has specific skills, subject to review on a case-by-case basis.

Member Age	≤ 20	21 – 30	31 – 40	41 – 50	51 – 60	61 – 70	≥ 71
Funds (£ million)	200	4,400	3,600	900	500	300	100

Members' Funds

The *Industria Pension Scheme* does not offer members any choice of underlying investments. Rather, all members' funds are allocated to the Target Retirement Fund (TRF). TRF is a “lifestyling” fund where the investment philosophy allows members maximum exposure to assets which are expected to produce above-average returns, while preserving capital as the individual begins to move towards retirement. The TRF allocates each member's fund according to a pre-defined formula based on the member's age. This approach reduces the need for active management, and so members benefit from relatively low investment expenses.

The *Industria Pension Scheme* currently has £10 billion of assets under management, which are broken down by asset class as per the table below.

Age	Asset Class (£ million)				
	Alternative Assets*	Equities	Bonds	Cash	Total
18 – 30	920	2,760	460	460	4,600
31 – 40	540	1,440	1,080	540	3,600
41 – 50	90	270	360	180	900
51 – 60	25	100	250	125	500
61+	–	40	240	120	400
Total	1,575	4,610	2,390	1,425	10,000

* The category termed *alternative assets* covers a range of non-traditional investment vehicles including, but not limited to property, commodities and hedge funds.

2. Cryptocurrency Slide Show

Cryptocurrencies: A new asset class?

Presented by: JG Giant

International Investment Conference 2018

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What are Cryptocurrencies?

- Cryptocurrency – also known as Alternative / Digital / Virtual Currency
- Decentralised – not linked to the economy of any specific country
- A medium of exchange like traditional currencies
- Secure / transparent creation of new coins and processing of transactions
- International payment system
- Gained recognition with larger audience
- Over 1000 Cryptocurrencies available - \$80bn market

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A new asset class?

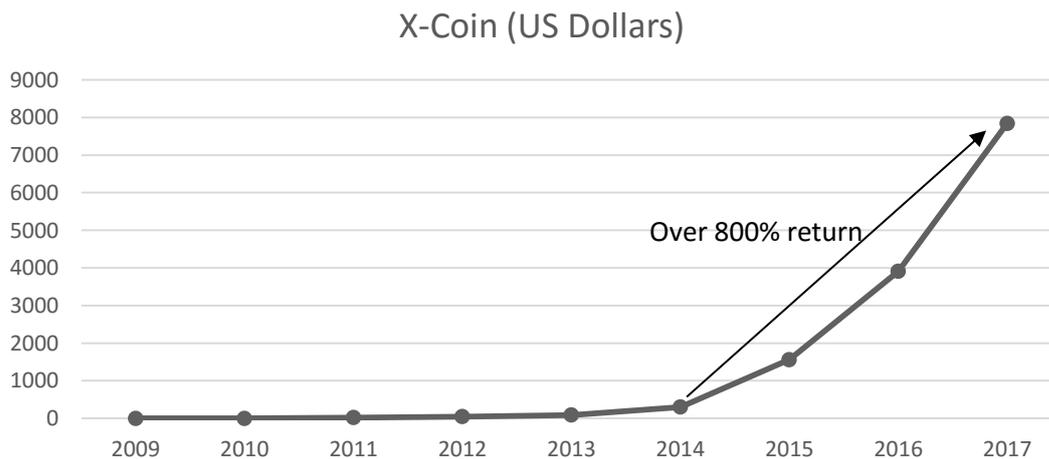
1. **Investment** – ample liquidity and opportunity to invest (\$6bn daily liquidity).
2. **Basis of value** – an agreed store of value (unproven on long-term basis)
3. **Correlation** – demand and supply driven by distinct market forces (low correlation with other assets)
4. **Risk-Reward Profile** – investors rewarded for assuming additional risk (favourable risk adjusted returns)

Is the market now feasible for institutional investment ?

3

Asset performance

- Large price increases
- Unlikely to continue long-term. A bubble?
- **No long-term price history**



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Diversification Benefits

- Low / Negative correlation with traditional asset classes
- Considerable risk reduction possible

Correlation Matrix

	Equities	Bonds	Commodities	Property	Cryptocurrencies
Equities	1.00	-0.71	0.51	0.87	0.25
Bonds	-0.71	1.00	0.63	0.65	0.18
Commodities	0.51	0.63	1.00	0.51	-0.45
Property	0.87	0.65	0.51	1.00	-0.29
Cryptocurrencies	0.25	0.18	-0.45	-0.29	1.00

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Warning

- Extreme price volatility has been experienced!!!
- New markets – No multi-decade history available as with other asset classes.
- Unclear which Cryptocurrencies (if any) will ultimately prove dominant / feasible?
- Large losses are possible.
- Unclear how the regulator will handle Cryptocurrency investment for institutional investors.

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How to invest?

- Brokerages & fees – expensive & not transparent
 - Cryptocurrency indices
 - Cryptocurrency derivative markets now available
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Any Questions?

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Notes

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- Cryptocurrencies have a fixed number of coins
 - utilises Blockchain, a new-age technology, allows for secure payments
 - Peer-to-peer transactions mean that there is no need for banks or other parties to intermediate trades
 - The most dominant Cryptocurrency is X-Coin
 - Uncertain how regulation will respond
 - Note to self: ensure Cryptocurrency market is sufficiently liquid. Ensure the IPS holding is small relative to the daily liquidity.
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3. Extract From Investment Mandate: *Industria Pension Scheme*

Funding objective

IPS's funding objective and the appetite for investment risk are the responsibility of the Trustees.

The Trustees have established an Investment Committee to set an appropriate mix of assets consistent with the Trustees' funding objective and appetite for risk. They also provide oversight of its implementation. The Investment Committee is accountable to the Trustees.

The day to day investment management of the Fund is provided by highly regarded professional asset managers, in line with the asset allocation provided by the Investment Committee.

Investment strategy

The fund has a long-term time horizon and as a result has historically invested significantly in equities. To date the fund has experienced favourable long-term risk-adjusted returns.

Over the past decade the trustees have spent time and effort educating themselves and members about the advantages of alternative asset classes. As a result the fund allocates a meaningful percentage of the asset portfolio to alternative asset classes such as property, commodities and hedge fund investments.

Risk management

The primary technique used to manage risk in the fund is diversification. By holding a wide variety of investments the portfolio is able to achieve lower volatility overall. This is expected to result in more stable investment returns over time.

By owning a range of different assets, investors will be less affected by a decision or event that has a strong impact on one company, industry or asset class. The positive performance of some investments neutralizes the negative performance of others. Therefore, the benefits of diversification hold only if the securities in the portfolio are not perfectly correlated.

END OF SCENARIO MATERIAL