

Course Outline for Education and Training Programs undertaken by Gilt Investments Pty Ltd

# Introduction to Fixed Income: Bank of Papua New Guinea, Port Moresby

Gilt Investments Pty Ltd

Presenters: Alastair Healey & Richard Brennan

# Course Outline

The Gilt Training and Education Program has been specifically developed for the Bank of Papua New Guinea, Clients and banking participants to introduce, refresh and upskill participants about the characteristics of the primary and secondary fixed income market, different forms of fixed income and money market security, valuation techniques and portfolio management principles and practices.

# Course Program

The **5-business day** Introduction to Fixed Income Training Course is scheduled for Monday 17<sup>th</sup> July 2023 to Friday 22<sup>nd</sup> July 2023 at the Crown Hotel on the corner of Hunter and Douglas Streets in Port Moresby. Session times are 9.00am to 4.00pm each day.

Registration for the 5-day event will be \$1,500 AUD per participant or \$3,510 Kina.

The 5-day Introductory course comprises 4 days of theoretical instruction with the 5<sup>th</sup> day being reserved to upskill participants in the practical application of theory taught throughout the Introductory course.

At the end of the Introductory course, participants will understand:

- the structure and function of the primary and secondary fixed income markets;
- the similarities and differences between common fixed income products;
- how the market is regulated;
- factors that impact the pricing of fixed income securities;
- fixed income risks and risk evaluation
- benefits of portfolio diversification;
- · introduction to fixed income valuation; and
- valuation methods for different types of debt security.

### **Course Materials:**

- Attendees are encouraged to bring charged laptops to the practical session on Day 5 which includes
   MS Excel software or if not available, then are encouraged to share resources with other attendees.
- Attendees will receive a USB on Day 5 which contains the Course Presentation in pdf format and a copy of the Gilt Excel Calculator for Pricing Debt Securities.
- Attendees are encouraged to become listed on our mailing list to receive further educational supplements when developed.

## Course Outline – Introductory Program

Schedule	Timing	Course Agenda
	9.00 am – 9.30 am	Course Introduction, Disclaimer, Housekeeping and Greeting
		1. History of Money
		2. Purchasing Power of Money
		3. Role of a Central Bank;
	9.30 am – 10.30 am	4. Fixed Income Overview
Day 1		5. Methods of Financing
The Fixed		6. Primary Benefits of Fixed Income
Income		7. Investment Risk
Market and		8. Q&A
the Yield	10.30am – 11.00 am	Morning tea (provided by venue)
Curve		9. Types of Fixed Income Products (Savings Accounts/ Term Deposits)
(Theory)		10. Laddering Term Deposits
	11.00am – 12.30 pm	11. Introduction to Debt Securities
		12. Terminology Used for Debt Securities
		13. Key Considerations for an Investor interested in Debt Securities
		14. Q&A
	12.30 pm – 1.30pm	Light lunch (provided by venue)

		<ol><li>Comparing Debt Securities to Term Deposits/ Shares</li></ol>
		16. How does an Investor Access Debt Securities? (Primary and
		secondary Market)
	1.30 pm – 2.30 pm	17. Secondary Market Trading of Debt Securities
		18. The Regulators of the Australian Debt Market
		19. Q&A
	2.30 pm – 3.00 pm	Afternoon tea (provided by venue)
	2.50 pm 3.00 pm	20. Factors Impacting the Price of Debt Securities
		21. Understanding Yield
	3.00 nm 4.00 nm	22. What is a Yield Curve?
	3.00 pm – 4.00 pm	23. Uses of the Yield Curve
		24. Q&A
Schedule	Timing	Course Agenda
		25. Credit Quality, Credit Risk and Credit Spreads
		26. Default Events
		27. Credit Ratings and Agencies
	9.00 am – 10.30 am	28. Liquidity
		29. Yield Curve Spreads
Day 2		30. Understanding Interest Rate Swaps
Credit		31. Q&A
Quality,	10.30am – 11.00 am	Morning tea (provided by venue)
Spreads,		32. The Swap Curve
Types of Debt		33. Movement in Yields and Spreads
Security/	11.00am – 12.30 pm	34. Credit Default Swaps
Hybrid		35. Categories of Debt Security
Securities/		36. About Bonds/ Govt Bonds/ Semi-Govt Bonds/ Corporate Bonds/
Asset Backed		Kangaroo Bonds/ Euro Bonds/ Covered Bonds
Securities and		37. Why Buy Bonds?
Principles of		38. Q&A
Compounding	12 20 nm 1 20nm	
(Theory)	12.30 pm – 1.30pm	Light lunch (provided by venue)
(meory)		39. Hybrid Securities
	4.20	40. Asset Backed Securities
1	1.30 pm – 2.30 pm	41. Mortgage Backed Securities
		42. Q&A
	2.30 pm – 3.00 pm	42. Q&A Afternoon tea (provided by venue)
	2.30 pm – 3.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest
		<ul> <li>42. Q&amp;A</li> <li>Afternoon tea (provided by venue)</li> <li>43. Simple Interest Versus Compound Interest</li> <li>44. Compounding and the Rule of 72</li> </ul>
	2.30 pm – 3.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest
	2.30 pm – 3.00 pm	<ul> <li>42. Q&amp;A</li> <li>Afternoon tea (provided by venue)</li> <li>43. Simple Interest Versus Compound Interest</li> <li>44. Compounding and the Rule of 72</li> </ul>
Schedule	2.30 pm – 3.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda
Schedule	2.30 pm – 3.00 pm 3.00 pm – 4.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A
Schedule	2.30 pm – 3.00 pm 3.00 pm – 4.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)
Schedule	2.30 pm – 3.00 pm 3.00 pm – 4.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money
Schedule  Day 3	2.30 pm – 3.00 pm 3.00 pm – 4.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)
	2.30 pm – 3.00 pm 3.00 pm – 4.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)  49. What the DCF Tells the Investor
Day 3	2.30 pm – 3.00 pm 3.00 pm – 4.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)  49. What the DCF Tells the Investor  50. Net Present Value
Day 3 Time Value of	2.30 pm – 3.00 pm 3.00 pm – 4.00 pm	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)  49. What the DCF Tells the Investor  50. Net Present Value  51. Using IRR to Evaluate an Investment Decision
Day 3 Time Value of Money,	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)  49. What the DCF Tells the Investor  50. Net Present Value  51. Using IRR to Evaluate an Investment Decision  52. Q&A
Day 3 Time Value of Money, Discounted	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)  49. What the DCF Tells the Investor  50. Net Present Value  51. Using IRR to Evaluate an Investment Decision  52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts
Day 3 Time Value of Money, Discounted Cash Flows,	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am  10.30am – 11.00 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest  44. Compounding and the Rule of 72  45. Understanding Exponential Functions  46. Q&A  Course Agenda  47. Time Value of Money  48. Discounted Cashflow (DCF)  49. What the DCF Tells the Investor  50. Net Present Value  51. Using IRR to Evaluate an Investment Decision  52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts  54. Using DCF to Value a Bond
Day 3 Time Value of Money, Discounted Cash Flows, NPV and IRR,	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest 44. Compounding and the Rule of 72 45. Understanding Exponential Functions 46. Q&A  Course Agenda  47. Time Value of Money 48. Discounted Cashflow (DCF) 49. What the DCF Tells the Investor 50. Net Present Value 51. Using IRR to Evaluate an Investment Decision 52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts 54. Using DCF to Value a Bond 55. Effect of Compounding on Present Value
Day 3 Time Value of Money, Discounted Cash Flows, NPV and IRR, Fixed Income Valuation	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am  10.30am – 11.00 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest 44. Compounding and the Rule of 72 45. Understanding Exponential Functions 46. Q&A  Course Agenda  47. Time Value of Money 48. Discounted Cashflow (DCF) 49. What the DCF Tells the Investor 50. Net Present Value 51. Using IRR to Evaluate an Investment Decision 52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts 54. Using DCF to Value a Bond 55. Effect of Compounding on Present Value 56. Valuing Fixed Rate Bonds
Day 3 Time Value of Money, Discounted Cash Flows, NPV and IRR, Fixed Income	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am  10.30am – 11.00 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest 44. Compounding and the Rule of 72 45. Understanding Exponential Functions 46. Q&A  Course Agenda  47. Time Value of Money 48. Discounted Cashflow (DCF) 49. What the DCF Tells the Investor 50. Net Present Value 51. Using IRR to Evaluate an Investment Decision 52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts 54. Using DCF to Value a Bond 55. Effect of Compounding on Present Value 56. Valuing Fixed Rate Bonds 57. Types of Coupon Structure
Day 3 Time Value of Money, Discounted Cash Flows, NPV and IRR, Fixed Income Valuation Valuing Types of Debt	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am  10.30am – 11.00 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest 44. Compounding and the Rule of 72 45. Understanding Exponential Functions 46. Q&A  Course Agenda  47. Time Value of Money 48. Discounted Cashflow (DCF) 49. What the DCF Tells the Investor 50. Net Present Value 51. Using IRR to Evaluate an Investment Decision 52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts 54. Using DCF to Value a Bond 55. Effect of Compounding on Present Value 56. Valuing Fixed Rate Bonds 57. Types of Coupon Structure 58. Retiring Bonds by and Issuer
Day 3 Time Value of Money, Discounted Cash Flows, NPV and IRR, Fixed Income Valuation Valuing Types of Debt Securities	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am  10.30am – 11.00 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest 44. Compounding and the Rule of 72 45. Understanding Exponential Functions 46. Q&A  Course Agenda  47. Time Value of Money 48. Discounted Cashflow (DCF) 49. What the DCF Tells the Investor 50. Net Present Value 51. Using IRR to Evaluate an Investment Decision 52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts 54. Using DCF to Value a Bond 55. Effect of Compounding on Present Value 56. Valuing Fixed Rate Bonds 57. Types of Coupon Structure 58. Retiring Bonds by and Issuer 59. Bond Valuation Example
Day 3 Time Value of Money, Discounted Cash Flows, NPV and IRR, Fixed Income Valuation Valuing Types of Debt	2.30 pm – 3.00 pm  3.00 pm – 4.00 pm  Timing  9.00 am – 10.30 am  10.30am – 11.00 am	42. Q&A  Afternoon tea (provided by venue)  43. Simple Interest Versus Compound Interest 44. Compounding and the Rule of 72 45. Understanding Exponential Functions 46. Q&A  Course Agenda  47. Time Value of Money 48. Discounted Cashflow (DCF) 49. What the DCF Tells the Investor 50. Net Present Value 51. Using IRR to Evaluate an Investment Decision 52. Q&A  Morning tea (provided by venue)  53. Summary of Key Valuation Concepts 54. Using DCF to Value a Bond 55. Effect of Compounding on Present Value 56. Valuing Fixed Rate Bonds 57. Types of Coupon Structure 58. Retiring Bonds by and Issuer

		61. Using Excel to Calculate Bond Pricing
		62. How to Value Floating Rate Notes
	1.30 pm – 2.30 pm	63. How to Value Perpetuals
	'	64. Perpetual Valuation Example
		65. Q&A
	2.30 pm – 3.00 pm	Afternoon tea (provided by venue)
•	2.30 pm 3.00 pm	66. Zero Coupon Bonds
		67. How to Value Zero Coupon Bonds
	3.00 pm – 4.00 pm	68. Bank Bills and NCD's
		69. Q&A
Schedule	Timing	Course Agenda
		70. Inflation Linked Bonds/ Capital Indexed Bonds
		71. How a Capital Indexed Bond Works
	9.00 am – 10.30 am	72. When to Purchase an Inflation Linked Bond
		73. Q&A
	10.30am – 11.00 am	Morning tea (provided by venue)
	10.30aiii - 11.00 aiii	74. Bond Fund or Bond Portfolio
Day 4	11 000 12 20	
Fixed Income	11.00am – 12.30 pm	75. Diversifying your Portfolio Using Debt Securities
Valuation	12.22	76. Q&A
Continued,	12.30 pm – 12.30pm	Light lunch (provided by venue)
Bond		77. Lifecycle Investing
Portfolios and	12.30 pm – 2.30 pm	78. Demographic Trends
Portfolio		79. How Debt Securities Can Improve Portfolio Performance
Construction		80. Volatility and Sequencing Risk
(Theory)		81. Diversification Benefits of Uncorrelated Assets
(1110017)		82. Case Study
		83. Q&A
	2.30 pm – 3.00 pm	Afternoon tea (provided by venue)
	3.00 pm – 4.00 pm	84. Introduction to Fixed Income Portfolio Construction
		85. Fixed Income Portfolio Management
		86. Methods of Fixed Income Portfolio Creation
		87. Laddering, Barbell, Bullet, Duration Matching, Sector Rotation, Credit
		Quality
		88. Value at Risk Estimations for a Fixed Income Portfolio
		89. Q&A
Schedule	Timing	Course Agenda
	9.00 am – 10.30 am	90. Practical Session - How to Construct Yield Curves
Day 5		Morning tea (provided by venue)
Valuing Fixed		91. Practical Session - Using DCF, NPV and IRR
Income	11.00am – 12.30 pm 12.30 pm – 12.30pm	Light lunch (provided by venue)
Securities		
(Practical	12.30 pm – 2.30 pm	92. Practical Session - Simple Bond Pricing using Excel
Session)	2.22	Afternoon tea (provided by venue)
36331011)	2.30 pm – 4.00 pm	93. Practical Session – More Complex Bond Pricing using the Gilt
		Calculator
Ì		94. Course Conclusion