

Contents

Foreword	iii
Preface	xi
About the authors	xiii
Timeline of major events and meetings	xv
Chapter 1: Introduction	1
Contact	1
The introduction of decimal currency	2
Forgeries!	3
Dr Coombs' response	6
Endnotes	7
Chapter 2: From rum to plastic banknotes	9
Currency and Australian history	9
Counterfeiting and forgery	11
Penalty for forgery	11
Simulation not reproduction	13
Philosophies on producing 'difficult to forge' banknotes	15
Endnotes	16
Colour plates	17
Chapter 3: Producing Australian banknotes	25
Banknotes in general	25
Plastics and polymers	26
The 1966 Australian banknote	27
Initial thoughts on plastic banknotes	27
The first prototype banknotes	28
The polypropylene story (a clear plastic laminate)	38
Testing without a field trial	40
The Turbula or tumble test	43
Endnotes	45

Chapter 4: The first two meetings	47
The scientist 'guests'	47
The Bank representatives	50
Bankers' Clubs	52
The first meeting	52
Recollections from Thredbo	54
The background of the two organisations: CSIR/CSIRO and the Bank	56
Sources of tension	59
The need for a suitable business model	60
The Bank's 1968 business model	61
The CSIRO 1968 business model	62
Solomon's business model	63
The banknote and security document value chain	64
The CSIRO–Bank 1979 business model	65
The Fink report business model	65
He who pays the piper calls the tune	66
Testing procedures	66
Endnotes	67
Chapter 5: What to do next?	69
The Forest Products project	69
The CSIRO–Bank agreement	69
The June 1970 meeting and further work	70
The Bank delays its response	72
The February 1972 meeting and its results	73
Establishing the project	76
Endnotes	77
Chapter 6: 1972 to 1974	79
Another letter of agreement	79
The Bank's requirements	79
Paper or plastic?	80
Establishing proof of concept	80
The first 'quarterly' meeting	83
Producing diffraction gratings	85
Other security devices	86

Patenting the invention	87
Agreements	88
Direct contact with the Governor	90
Commercialisation issues	92
Preparing for the Governor's meeting and the role of Don Parr	94
Reporting considerable progress	95
The Chief Executives' meeting	97
Endnotes	99

Chapter 7: The Mornington think tank **101**

Invitees (and exclusions!)	101
Purpose of the meeting	102
Solomon's research plan	102
Involving Bank staff	103
The longer-term research program	104
Polypropylene!	106
A coherent team	107
Endnote	107

Chapter 8: The hard grind **109**

Establishing the Currency Notes Research and Development Committee	109
Why Hamann?	109
The Currency Notes Research and Development Committee	110
Missed opportunity	111
The role of Gordon Andrews	112
Progress on diffraction gratings	113
Subsequent meetings	113
Recruiting the Project Leader	114
The Committee visits Fishermens Bend	116
The Assessments Panel gets to work	116
The CSIRO Forward Plan	119
Polypropylene at last!	122
A member of the CSIRO Executive joins the Committee	123
Planning the handover	123
The design freeze	127

The 1976 memorandum	128
The Bank has second thoughts	129
Senator Webster's visit: commercial matters	130
Working together at last!	132
Solomon's three options	133
Should an EBX machine be purchased?	134
1978 and still a research project	135
An external review	137
Endnotes	137

Chapter 9: The Tangalooma conference **139**

Dr Solomon's response	139
Who attended the conference?	139
A thorough internal review	140
What price security?	140
Optically variable devices	143
Graham Quint's intervention	143
Other security devices	144
Final discussion	145
Endnotes	145

Chapter 10: The Forward Planning Group (Fink Committee) **147**

Forward planning at last	147
CSIRO input	149
The Fink report	150
The importance of banknote design	155
Plastic or polymer?	156
Testing and public release	157
Endnotes	157

Chapter 11: Response to the Fink report **159**

Challenges all round	159
The EBX story	167
Staff recruitment: Bank uncertain	168
Perceived 'competitive' Four-Nation technology: better than CSIRO!	168
The Four-Nation visit	169
The presentation to the Four-Nation Group	171

The stolen note	172
Outcomes of the Four-Nation meeting	173
Evaluation of the CNRD technology	173
The US to produce first plastic notes with 'our' technology?	175
Presentation to US authorities	175
Rejection by the US	176
Testing by other banks	177
Staff transfers	178
The lull before the storm	178
Endnotes	179
Chapter 12: The \$10 commemorative banknote	181
Governor Bob Johnston: a critical appointment	181
The Bank takes over	182
Not quite!	183
The appointment of Don Addison	183
Governor's reviews	184
The machine-readable feature	185
Optically variable devices	186
Agreements	191
CSIRO sells the technology	196
The plastic banknote is released!	199
Secrecy and the press	200
Souvenir notes for CSIRO staff	203
Endnotes	203
Chapter 13: The legacy	205
A more secure and durable currency	205
A thriving export industry	206
But paper banknote suppliers won't give up easily	207
The final business model	208
CSIRO, the Bank project and the Australian innovation system	209
Endnotes	210
Index	211