Final Report

Risk management and efficient housing assistance provision: a new methodology: Stage 2: Technical Appendix

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for the

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ATTACHMENT 1: DATA DEFINITIONS: HOUSING COSTS

"Initial Average Dwelling Price"

is the mean/median of the two values of the cost of the construction of, or private purchase of dwellings for public housing as contained in the Productivity Commission's Report on Government Services, 2000. This value is then indexed to the change in median dwelling prices set out in the Real Estate Institutes, Market Facts, to bring to December 2000 values. Because public housing stock acquisition encompasses both spot purchases and new construction, and because the land cost component is historic, it was considered the above analysis would more closely reflect a proxy for average public housing acquisition costs. This is used as the average commencing dwelling acquisition cost in each State

"Other Purchasing Expenses"

is the cost of legal and procurement costs, but not including stamp duty, associated with acquiring the dwellings and expressed as a percentage of purchase value. This value is based upon bulk conveyancing, fixed fee experience, and procurement by tender processes.

"Initial Maintenance and Rates Costs"

is the operating cost of public housing minus interest expenses and costs of dwelling disposals as set out in the Productivity Commission's Report On Government Services 2000. These costs for each State are indexed to the weighted average CPI for the six capital cities and calculated as an annual percentage of the initial average dwelling price as at December 2000.

"Initial Administration Costs"

is the administration cost of public housing as set out in the Productivity Commission's Report On Government Services 2000. These costs for each State are indexed to the weighted average CPI for the six capital cities and calculated as an annual percentage of the initial average dwelling price as at December 2000.

"Other Selling Expenses"

is the cost of legals and other disposal costs, (but not including stamp duty) expressed as a percentage of sale value. This value is based upon bulk conveyancing fixed fee experience, and disposal by auction processes.

"Assisted Tenant Vacancy Rate"

is the number of vacant public housing dwellings (after deducting untenantable dwellings) divided by the total public housing dwellings, (minus untenantable dwellings),(expressed as a percentage), as set out in the Productivity Commission's Report on Government Services, 2001

"Private Tenant Vacancy Rate"

is the vacancy rate, (expressed as a percentage), applying to private residential rental dwellings for the six capital cities plus Darwin as set out in the Real Estate Institute of Australia's Market Facts for the December quarter, 2000.

"Tenant Relocation Rate"

is the number of tenants transferring within the public housing system, (after deducting untenantable dwellings) divided by the total public housing dwellings, (minus untenantable dwellings),(expressed as a percentage), as set out in the Productivity Commission's Report on Government Services, 2001.

"Stamp Duty"

is the percentage of either initial purchase value or final sale value assumed to be paid in stamp duty.

"Initial Percentage Of Income In Rent"

is the assumed annual commencing proportion of the tenants gross income from all sources that is paid in rent.

"Initial Dwelling Disposal Rate"

is the assumed percentage of original dwellings sold each year.

"Loan Origination Costs % Of Initial Loan Principal"

Mortgage originators receive a once off fee for loan origination which is expressed as a percentage of the initial loan amount borrowed.

Loan Administration Costs % Of Loan Principal Outstanding

Home loans also incur an annual administration cost for functions such as repayment collection, arrears and default management. This is usually expressed as an annual percentage of the loan principal outstanding.

"Tax Paying Entity"

is the assumed tax regime applying to the investor in the bonds and entities receiving interest from short term borrowings.

ATTACHMENT 2: ANALYSIS DEVELOPMENT

1. The Process

Essentially carrying out this project requires the following:

- modification of the Affordable Housing National Research Consortium's Housing Subsidy Model such that it is able to calculate subsidy for a:
 - debt option where dwellings are purchased for social housing tenants and sold as tenants leave;
 - rent assistance option;
 - home loan option;
 - on budget (grant funded) public housing (the fifth option shared equity is simply a combination of the results for home loans and on-budget grant funding of public housing);
- development of two streams of technical analysis;
 - obtaining the requisite housing cost information as necessary inputs for the starting day of the Model simulation;
 - obtaining the risk data; analysing that risk data for distributions and correlations; and completing the simulations for inputting the necessary risk data numbers to be used *through* the financial modelling;
- finalising the assumption issues, including commencing household incomes and terms of the transaction.

The steps in the post model modification part of the research are:

- obtain 20 years of risk data;
- conduct frequency distribution analysis
- conduct correlation and covariance analysis;
- choose probability method, i.e. Monte Carlo or 'Smoothed' Monte Carlo, (Latin Hypercube);
- complete probability analysis;
- complete financial modeling of 100 scenarios; and
- document results and policy implications.

2. Model Modification And Operation

The Model has been modified to meet the above requirements and a copy has been lodged with this final Report.

Options

Debt Option

The Housing Subsidy model essentially calculates the commencing amount of funds that should be put on deposit to pay required rental subsidy for social housing tenants and capital shortfalls on debt repayments (if any) for the term of the transaction. The Model assumes dwellings required to house social housing tenants are initially purchased from the proceeds of a bond issuance, and that as time goes on the proceeds of sales of the dwellings are used to repatriate the principal owed on the bonds and to provide for any operational shortfalls. In the event that the net sale value of the dwellings exceeds the bond principal outstanding the Model reduces the initial capital subsidy injection required, and makes up for any operating shortfall by short term borrowings such that the surplus from sale of dwellings versus bond principal repayments is exactly equal to the principal outstanding on the short term borrowings at the end of the transaction.

The Model uses Excel Goal Seek capacities to exactly calculate the initial contribution required such that at the end of the transaction all liabilities are discharged, and the accumulated cash flow is zero. In addition to the debt funded option the Model also has the capacity to calculate subsidy costs of three other housing assistance options, Rent Assistance, Home Purchase Assistance, and On Budget Capital Funding of Public Housing.

Rent Assistance

Using the same method (without any bond funding and short term borrowing), the Model also automatically calculates the commencing amount of funds that should be put on deposit (and to earn interest prior to being drawn down) to pay the required rental subsidy for the same social housing tenants should they be renting dwellings in the private sector.

In this model all assumptions about costs and revenues are the same as in the debt funded option, however the Model simply computes as subsidy the difference between the required payment according to income and the payment that would be required if market rents are being charged. As in the debt option, it is assumed all tenants leave at (or by) the end of the transaction period.

Home Purchase Assistance

The home purchase assistance option presumes that home loans are provided to clients. These loans are funded from the proceeds of a bond issuance. The bond issuance has exactly the same characteristics as those that applied to the bond issuance in the debt option. The exception is that the total value of the bonds issued is less than that applying to the debt option by the extent of the borrowers initial purchase deposit (which is variable in the Model). It is assumed that the loans provided to the borrowers are 'straight line', i.e. constant repayment, credit foncier loans and that the difference between the borrowers' capacity to pay at the requisite percentage of income and the required loan repayment is subsidised until, or if, borrowers incomes can support a full unsubsidised repayment. The household income, dwelling value and related assumptions are the same as those applying in the other options (see subsequent dialog boxes).

Repayments of principal and prepayments are used to repurchase bonds issued whilst borrower interest payments plus subsidy meet the bond interest obligations. As with the debt option the home purchase option calculates the commencing amount of funds that should be put on deposit to pay loan subsidies, and bond interest or principal shortfalls (if any) for the term of the transaction. In the event that at transaction termination the sale of the dwellings from defaulting loans, or loan principal payments exceeds the bond principal outstanding the Model reduces the initial capital injection required, and makes up for any operating shortfall by short term borrowings such that the surplus from loan principal payments (and/or the sale of dwellings arising from defaulting loans) versus bond principal payments is exactly equal to the principal outstanding on the short term borrowings. Identically to the debt option, the Model exactly calculates the initial contribution required such that at the end of the transaction all liabilities are discharged and the accumulated cash flow is zero.

On Budget Capital Funding of Public Housing

The Model now also contains a further comparison with on budget capital funding of public housing. All of the tenant income, rates maintenance and administration cost, and dwelling value assumptions, etc. are always the same for the capital funding model as all other options.

The practical reality is that mainstream State Housing Authorities use grant funds to purchase dwellings, which are then occupied by public tenants. As existing public tenants leave new subsidised public tenants take their place. Consequently, the Model assumes the dwellings are purchased from grant funds, any shortfall/surplus in quarterly net rents after rebates is compensated by short term borrowings, and at the end of the quarter are either paid for from, or returned to, internal funds. There are no places for private tenants. Vacant dwellings are reoccupied by social housing tenants or sold.

At the end of the transaction all of the remaining dwellings are sold. If, as in some of the Debt Model cases, dwellings are assumed to be sold throughout the term, these assumptions carry through to the capital funding option.

Shared Equity

In the current simulations the analysis simply assumes a 50% share on the part of the housing authority and a 50% share on the part of the purchaser. All other assumptions are as per those applying to either the public housing or the home loan module. Subsidy results are therefore simply the mean of the outcome for public housing and home loans.

Model Operation

Within the module are 8 command buttons. These are:

- Housing Cost
- Financial.
- Housing Index.
- Tenant/Rent.
- Home Loan.
- TaxCom.
- Scenarios (the only input tables in the first module).
- Scenarios Choose.

and two reporting tables:

- Results (the main reporting table).
- Cash Flow (the second reporting table).

The Model requires users to estimate the 'real' interest rate currently applying and calculates the nominal interest rate from the two components of CPI and Real Interest Rates.

The Real Debt or Investment Rate is the difference between the assumed inflation rate and the nominal interest rate on borrowings/interest earnings.

The Model automatically calculates nominal debt and investment rates according to the formula (1+n)*(1+i)-1, where:

- **n** = the assumed real debt or investment rate.
- i = the Consumer Price Index (forecast) for Australia.

Users have a choice of debt instrument between floating, fixed and real rate instruments. Internalised within the Model are the Reserve Bank's formulas for calculating interest payments on the bonds (half yearly for nominal bonds, and quarterly for real rate bonds) and for calculating the bond price at any early redemption (i.e. before maturity). The formulas for calculating bond Prices can be further examined in the Reserve Bank's Press Release NO 24, 1992, titled 'Pricing of Government Securities'.

Housing Indexation

These indexation functions set down the real percentage by which the initial dwelling prices, maintenance and rates and administration costs increase or decrease each year.

If zero is inserted then dwelling prices increase by inflation and maintenance, rates and administration costs are maintained at the same percentage of dwelling value that is inserted in the transaction at the beginning. If a plus or minus percentage is included, the original cost or price is adjusted in the first year by the following formula.

- (1+c)*(1+i)-1, where:
- **c** = the Cost or Price Growth Rate.
- i = the Consumer Price Index (forecast) for Australia.

i.e. if inflation is say 2.5% and cost growth is 1% real then \$100 becomes

- 100+{100* ((1+0.01)*(1+0.025)-1))} = 103.525
- or if real cost growth is –1%
- $100+\{100^*((1-0.01)^*(1+0.025)-1))\} = 101.475.$

The process is repeated for the second year and so on. Figures should be inserted as percentages. If CPI increases are assumed, zero is inserted in each of the three boxes.

The Model provides for up to three automatic and six manual economic scenarios to be tested.

These Scenario options will be modified to include scenarios generated by the probability analysis.

Results

The results analysis sets out all of the details for the particular option and case and the quantified outcomes. These outcomes essentially comprise three components.

The outputs are:

- gross capital contribution required per \$100M of dwelling acquisition;
- the present value subsidy per tenant year per \$100M of dwelling acquisition; and
- net capital contribution after extra direct tax receipts per \$100M of dwelling acquisition.

Diagram 1 sets out the model components.

Diagram 1: Model Components



Housing Cost Data

Public housing and home purchase cost information is required as necessary inputs for the starting day of the Model simulation.

In the Stage 4 Report for the Affordable Housing National Research Consortium data was obtained from all States on housing cost.

The housing cost variables (for which the definitions are set out in Attachment 1) are:

- initial average dwelling price;
- other purchasing expenses (the cost of legal and procurement costs);
- initial maintenance and rates costs (the operating cost of public housing minus interest expenses);
- initial administration costs (is the administration cost of public housing);
- other selling expenses (is the cost of legals and other disposal costs); and
- tenant vacancy rates.

We have therefore used, for purposes of the analysis summarized in the next chapter, the definitions and housing cost data for all States and capital cities which were used in the Affordable Housing National Research Consortium's work and which are summarized below and in Attachments 1 and 3.

Table 1: Common Initial Assumptions

Assumptions And Inputs	Number
Initial Purchasing Expenses	1.2%
Final Selling Expenses	1.2%
Stamp Duty On Purchase To Account Of Transaction	None
Loan Origination Costs (% Of Initial Loan Principal)	0.35%
Loan Administration Costs (% Of Loan Principal Outstanding)	0.53%

Table 2: State Initial Housing Cost Inputs

Variable	NSW	Vic.	Sth. Aust.	ACT	Tas.	W.A.	Nth. Terr.	Qld.
Initial Dwelling Value 000's ¹	149.5	140.5	110.0	141.5	112.0	111.9	146.7	118.7
Operating Cost % p.a. ²	1.5	0.7	1.9	2.1	2.0	0.5	0.6	2.0
Administration Cost % p.a. ²	0.8	0.6	0.9	0.7	1.4	0.8	0.3	0.8
Vacancy Rate Public % ⁴	0.31	1.06	2.59	0.68	1.59	0.91	0.37	0.65

Source: Tables 1-4, Attachment 3

1 Table 1 Attachment 3,

2 Table 2 Attachment 3,

3 Table 3 Attachment 3,

4 Table 4 Attachment 3,

5 Derived from Model.

Systematic Risk Data

As previously outlined the main systematic risk data are:

- Consumer Price Index (CPI);
- Real income growth rates i.e. real percentage changes in Average Weekly Ordinary Time Earnings (All Persons) (AWOE); and
- Debt borrowing rates, i.e. Commonwealth Bond Rates;
- Real dwelling price growth;
- Rental yields; and
- Real cost growth.

Definitions and sources of the systematic risk data are outlined in Attachment 4.

Tables setting out the systematic risk variables (absolute numbers and real percentage change per annum, except for rental yields) are set out in Attachment 5.

Tenant relocation and dwelling disposal rates are independent of this analysis, remain the same in all cases and are derived from the earlier housing cost data.

Preparation of Data for Simulations

The probability analysis generates a 100 simulations for each metropolitan area of the requisite risk data for inputting into the Model. Hence, Stage 1 and this study encompasses 800 simulations, in total.

The production of the simulations has been achieved by the use of a software program called @RISK, Version 3.5.2, which produces automatic simulations from the actual data inputted in an EXCEL spreadsheet.

Because it is important to ensure the simulations replicate the characteristics, range boundaries and relationships inherent in the past data, @RISK requires users to specify two main conditions before running:

- the type of frequency distribution exhibited by the actual past data; and
- any correlations or inverse correlations between the different actual past data series, i.e. between, say CPI and AWE, and the correlation value that applies, i.e. say 0.4. or 0.5 etc.

Frequency Analysis

GRAPH 1

The frequency of a data score is simply the number of times a particular score appears in a data set. For example, the real percentage change in house prices may score -0.5%, 20 times. This is the frequency of that data value. The frequency distribution of a data series is simply the number of times a data score occurs at each value in the distribution. A frequency distribution is formed by calculating the range of data i.e. say -12.0% to +18%, constructing identical interval sets, i.e. 3% will give 10 intervals, and plotting the number of times a data score occurs at each interval. Now a 'normal' distribution produces a bell shaped graph, that is the greatest number of scores occurs at the mid point (mode) in the data range. However, distributions can vary substantially from the 'normal' and be distributed or 'skewed' towards one or other end of the range, or it might be binomial i.e. there are two points in the range where very high incidences of data scores occur.

Graph 1 sets out the frequency distribution for the CPI for Sydney.



SYDNEY: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001

Quarterly Percentage Change In CPI

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index : Table 1b, All Groups Index Numbers (quarter) (a)

It is clear that CPI in Sydney does not have a 'normal' distribution but is closer to a binomial distribution. These distributional characteristics for each data set are incorporated in the Simulation Modeling of systematic risk variables.

Attachment 6 contains a complete set of graphs of the frequency distributions for all systematic risk data series for all capital cities.

When one examines this data it provides a clue that the likely results of the subsidy analysis will be very different in the different metropolitan areas, because the distributions for particular risk variables are unique to that city. For example, with CPI, Adelaide's distribution is slightly skewed towards the lower values, whilst Melbourne's distribution is much more evenly distributed. In the case of Sydney, there is almost a classic binomial distribution.

Similarly, the distributions for Average Weekly Ordinary Time Earnings, Established Dwelling Prices and Median Rental Yields are also very different for each of the selected metropolitan areas.

Correlations

The Pearson Product-Moment Correlation Coefficient (r), or correlation coefficient for short is a measure of the degree of linear relationship between two variables, usually labeled X and Y. While in regression the emphasis is on predicting one variable from the other, in correlation the emphasis is on the degree to which a linear model may describe the relationship between two variables. In regression the interest is directional, one variable is predicted and the other is the predictor; in correlation the interest is non-directional, the relationship is the critical aspect.

The correlation coefficient may take on any value between plus and minus one. The sign of the correlation coefficient (+, -) defines the direction of the relationship, either positive or negative. A positive correlation coefficient means that as the value of one variable increases, the value of the other variable increases; as one decreases the other decreases. A negative correlation coefficient indicates that as one variable increases, the other decreases, the other decreases, and vice-versa.

Taking the absolute value of the correlation coefficient measures the strength of the relationship. A correlation coefficient of r=.50 indicates a stronger degree of linear relationship than one of r=.40. Likewise a correlation coefficient of r=.50 shows a greater degree of relationship than one of r=.40.

It is possible for two variables to be related (correlated), but not have one variable cause another (Stockburger, 1996).

It is likely that there are relationships between systematic risk variables which need to be replicated in the simulations. For example, common sense would suggest that if the percentage growth of dwelling prices is very high and very rapid, rental yields will fall and an inverse correlation will occur. However, if the extent and pace of any increase in dwelling prices is more muted, then rents may adjust and yields might be maintained.

Therefore an analysis of the possible correlation of every data series with every other data series has been conducted. Formal statistical analysis suggests that any correlation of 0.5 or above signifies a potentially significant relationship, so it is necessary to isolate those positive or negative correlations at or above 0.5.

Graphs 2 to 9 set out the statistically significant correlations between systematic risk variables that have been identified for all capital cities



ADELAIDE: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES 1980-2001

Extent Of Correlation

Source: Derived From Risk Data Tables Contained In Attachment 5

GRAPH 3



MELBOURNE: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES: 1980-2001:

Source: Derived From Risk Data Tables Contained In Attachment 5



SYDNEY: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES: 1980-2001

Extent Of Correlation

Source: Derived From Risk Data Tables Contained In Attachment 5

GRAPH 5



ACT: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES 1980-2001

Extent Of Correlation

Source: Derived From Risk Data Tables Contained In Attachment 5



HOBART: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES 1980-2001

Extent Of Correlation

Source: Derived From Risk Data Tables Contained In Attachment 5

GRAPH 7

PERTH: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES 1980-2001



Extent Of Correlation

Source: Derived From Risk Data Tables Contained In Attachment 5

GRAPH 8

DARWIN: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES 1980-2001



Extent Of Correlation

Source: Derived From Risk Data Tables Contained In Attachment 5

GRAPH 9

BRISBANE: ANNUALISED QUARTERLY PERCENTAGE CHANGE: CORRELATIONS BETWEEN SYSTEMIC RISK VARIABLES 1980-2001



Extent Of Correlation

Source: Derived From Risk Data Tables Contained In Attachment 5

These correlations have been entered into the simulation process for the @RISK modeling.

Carrying Out the Simulations

The first step in carrying out the simulations is to set the various requirements in the @RISK add in to Excel boxes. Diagram 2 below shows how the Excel screen looks with @RISK installed.

Diagram 2: The @RISK Screen

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The first step is to click on the *"Change @RISK settings"* menu button which is the third red button in the top @RISK menu bar. This is set out in Diagram 3 below.

Diagram 3: The Change Settings Button

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The next step is to open the *"Iterations"* Menu in the Settings Box and set the number of iterations which is required to be simulated (in this case 100). Diagram 4 sets out the procedure.

Diagram 4: Setting Iterations

Simulation Settings	×
Iterations Sampling Convergence Macro External	
# Iterations = 100 # Simulations = 1	
Each Iteration	
Allow Multitasking	
Pause on Error	
□ <u>U</u> pdate Display	
ОК	Cancel

Next the *"Sampling"* menu bar is selected and either Monte Carlo of Latin Hypercube sampling method is chosen (Latin Hypercube providing a 'smoother' distribution). Diagram 5 sets out the procedure.

Diagram 5: Sampling Characteristics

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The next three menu bars in the Settings box are optional and are only required if special simulations are being conducted.

After finalising the Simulation settings we established the Minimum, Most Likely, (i.e. most frequently occurring), Mean and Maximum Values for the 48 data series for all capital cities, (6 in each) to be simulated.

Next we click on the "Function" (*fx*), button in Excel;

Diagram 6: Function Button

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For each data series we select the risk frequency distribution formula which best replicates the frequency distribution for the data series being simulated. Diagram 7 shows the risk function being selected.

Diagram 7: Risk Frequency Formula Selection

Paste Function	? ×
Function category:	Function <u>n</u> ame:
Date & Time Math & Trig Statistical Lookup & Reference Database Text Logical Information User Defined Engineering @Risk	CurrentIter CurrentSim PTreeEvaluate PTreeGetCellFormula PTreeGetTableFormulas PTreeGetTreeData PTreeInflEvaluate RiskAutoVary RiskBeta RiskBetaMulti RiskBetaSubj
RiskBetaSubj(minimum, most l	ikely, mean, maximum)
No help available.	
2	OK Cancel

Next we insert the appropriate values in the frequency distribution formula dialog box.

Diagram 8: Risk Frequency Formula Dialog Box

_RiskBetaSubj			
Minimum	-0.3%	1 = -0.003	
most likely	3%	搔 = 0.03	
mean	5.16%	™ = 0.0516	
maximum	10.91%	1 = 0.1091	
No help available.		= 0.0516	
Minimum	•		
2 Formu	la result =0.0516	OK	Cancel

Then we copy the formula down the spreadsheet for the number of data points (periods) for which we wish to simulate.

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Diagram 9: Period Simulation

This process is replicated in the next column for any data series with which the first is correlated.

Diagram 10: Correlated Series

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The @RISK process only requires three more steps before being run. We established an output Cell and insert any value at all. We then selected the *"Add the selected cells as @RISK outputs"* button and click on it, Diagram 11 shows the procedure.

Diagram 11: Selecting The Outputs Procedure

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Then we selected the "*Display Input By Outputs Table*" button in the @RISK menu bar. Diagram 12 sets out the procedure.

Diagram 12: Selecting The Input Outputs Table

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This will display the Inputs By Outputs Table shown below.

Diagram 13: Input Outputs Table

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Inputs By Output				
Outputs	Inputs			
Cell Name Current	Cell Name	Current	Worksheet	Formula in 📤
A3 Output .1116	1C3	BetaSubj(-0.3%,3%,5.16%,10.91%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-0.3%,3%
	! D3	BetaSubj(-7.5%,4.5%,6%,23%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-7.5%,4.5
	! C4	BetaSubj(-0.3%,3%,5.16%,10.91%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-0.3%,3%
	! D4	BetaSubj(-7.5%,4.5%,6%,23%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-7.5%,4.5
	1 C5	BetaSubj(-0.3%,3%,5.16%,10.91%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-0.3%,3%
	! D5	BetaSubj(-7.5%,4.5%,6%,23%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-7.5%,4.5
	! C6	BetaSubj(-0.3%,3%,5.16%,10.91%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-0.3%,3%
	! D6	BetaSubj(-7.5%,4.5%,6%,23%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-7.5%,4.5
	107	BetaSubj(-0.3%,3%,5.16%,10.91%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-0.3%,3%
	1 D7	BetaSubj(-7.5%,4.5%,6%,23%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-7.5%,4.5
	! C8	BetaSubj(-0.3%,3%,5.16%,10.91%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-0.3%,3%
	- ! D8	BetaSubj(-7.5%,4.5%,6%,23%)	[Simulations.xls]Sheet1	'=RiskBetaSubj(-7.5%,4.5 💌
•				•
Delete Output		Fix/ Vary Correlate	Hide List	

Finally, for those data series which are correlated we click on the *"Correlate"* button and enter the correct correlation in the relevant cells in the matrix table. Diagram 14 sets out the process.

Diagram 14: Correlations

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A3	Output	.1116		1 C3		BetaSubj(-0.3% BetaSubj(-7.5%	,3%,5.16%,10.91% 4.5% 6% 23%)	%) [Simulation [Simulation	s.xls]Sheet1 s.xls]Sheet1	'=Riski '=Biski	BetaSubj(-0.3%,3% BetaSubi(-7.5% 4.5
	H	orrelate					,	1.			BetaSubi(-0.3%.3%
	En	ter Correlat	ion Coa	efficients in N BetaSubj(-7.5%	fatrix: 4.5%,6%,23%) with		Col	lapse Matrix			BetaSubj(-7.5%,4.5 BetaSubj(-0.3%,3% BetaSubj(-7.5%,4.5
	Co	relates:	2) C4	BetaSubj(-0.3%	,3%,5.16%,10.91%)						BetaSubj(-0.3%,3% BetaSubj(-7.5%,4.5
				! C3 BetaSubj(-0.3%,3	! D3 BetaSubj(-7.5%,4.	! C4 BetaSubj(-0.3%	! D4 BetaSubj(-7.5%,4.	! C5 BetaSubj(-0.3%,3	! D5 BetaSubj(-7.5%,4		BetaSubj(-0.3%,3% BetaSubj(-7.5%,4.5
		1 D3		0.65	1	0.65	0	0	0	0	PetaSubj(-0.3%,3% RoteSubi(-7.5%,4.5 =
•	— Ве	taSubj(-7.5%)	4.5%,6				-	-	-	-	be(d3ub)(-7.3%,4.3 •
Γ		! C4		0	0.65	1	0.65	0	0	0	
_	Be	taSubj(-0.3%,3%	,5.16%,10								
		1 D4		0	0	0.65	1	0.65	0	0	
	Be	taSubj(-7.5%,4.5	%,6%,23	0	0	0	0.05	4	0	0	
		: 03		U	U	U	0.05	1	U	U -	

At this point we run the simulations. This is done by clicking on the "Simulate" button on the Input Output Table Menu Bar. Next we copy the output to a spreadsheet ready for insertion in the Model. This is done by clicking on the "Results" button on the Menu Bar and then clicking on the "Reports to Worksheet" drop down menu. Diagram 15 shows the procedure.

Diagram 15: Getting The Results

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Iterations=100 Si	mulations= 1	Conpag			-2.114906E-03	5.160882E-02	0.1087327	
# Input Variables= 50	1	D3 (Input)			-6.872608E-02	5.994498E-02	0.2109009	
# Output Vanables=	n Hyporcubo	C4 (Input)			-2.017946E-03	5.159067E-02	0.1087992	
Buntime= 00:00:12	in typercube	D4 (Input)			-6.623757E-02	6.003958E-02	0.2201253	
Run on 08/31/2002. 2	2:56:52 PM	C5 (Input)			-2.231851E-03	5.165691E-02	0.1085192	
		D5 (Input)			-6.497067E-02	6.011386E-02	0.2071353	-
🗭 Simulation Data			Statis	tics Data Se	ensitivity	Scenarios		_ <u>_ </u>
Name	Output							-
Description	Output	BetaSubj(-0.3%,3%,5.16	5%,10.919	BetaSubj(-7.5%,4.5%,6%,2	3%) Be	taSubj(-0.3%,3%	<.5.16%,10.91 ¹	BetaSubj(
Iteration# / Cell	A3	C3		D3	C4			D4
1	0.1116	2.655098E-03		-6.872608E-02	1.7	98868E-03		9.675156E
2	0.1116	2.859776E-02		-5.053449E-03	3.2	62504E-02		6.673974E
3	0.1116	4.402599E-02		-1.414463E-02	2.5	07663E-02		4.628943E
4	0.1116	4.298607E-02		6.826995E-02	4.6	46095E-02		3.407053E
5	0.1116	0.0922863		0.1433029	0.0	809514		9.524344E
6	0.1116	7.000703E-02		0.0470318	2.8	81242E-02		6.475451E
7	0.1116	9.850925E-03		2.056219E-04	2.0	51312E-02		9.207124E
1 ° [10 1116	C 012617E 02		0 1052065 02	21	200415 02		E 4000000

This will generate the *"Reports To Worksheet" Dialog Box"*. We then click on *"Data"* and the simulation results are copied to the worksheet ready for copying into the Cash Flow Model. Diagram 16 shows the procedure.

Diagram 16: Copying To Worksheets

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🔛 Results					<u>- 0 ×</u>
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Simulation #1: Simulations_100 Sim # Input Variables= 50 # Output Variables= 1 Sampling Type= Latin Runtime= 00:00:12 Run on 08/31/2002, 2:9	Hypercube	elect Reports to Place in Excel: Statistics Graphs Data Graphs Sensitivities Graphs Senarios Graphs List of Input Distributions and Out Graphs - Input Distributions Automatically Place Reports Afte	- Output Cells - Tornados - Sampled Inputs - Symmary puts r Simulation OK Cancel	Inimum Mean Maximum 16 0.1116 0.1116 4906E-03 5.160882E-02 0.1087327 2608E-02 5.994498E-02 0.219909 7946E-03 5.159067E-02 0.1087992 3757E-02 6.003958E-02 0.2201253 3757E-02 5.156591E-02 0.1085192 7067E-02 6.011386E-02 0.2071353 vity Scenarios	
					▲
Name	Output				
Description	Output	BetaSubj(-0.3%,3%,5.16%,10.91	BetaSubj(-7.5%,4.5%,6%,23%)	BetaSubj(-0.3%,3%,5.16%,10.91	\$BetaSubj(
Iteration# / Cell	A3	C3	D3	C4	D4
1	0.1116	2.655098E-03	-6.872608E-02	1.798868E-03	9.675156E
2	0.1116	2.859776E-02	-5.053449E-03	3.262504E-02	6.673974E
3	0.1116	4.402599E-02	-1.414463E-02	2.507663E-02	4.628943E
4	0.1116	4.298607E-02	6.826995E-02	4.646095E-02	3.407053E
5	0.1116	0.0922863	0.1433029	0.0809514	9.524344E
6	0.1116	7.000703E-02	0.0470318	2.881242E-02	6.475451E
7	0.1116	9.850925E-03	2.056219E-04	2.051312E-02	9.207124E
	10.1116	012017E 02	0.1052065.02	2 1 2 9 6 41 1 0 2	E 4000000

Diagram 17 sets out the finished simulation for CPI for Adelaide.

Diagram 17: Finished Simulations

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7	2	6.24%	2.70%	8.9%	2.37	10.7%	8.57	10.3%	1.1%	0.07	7.37	3.8%	7.9%	9.7%	5.6%	6.67	6.1%	7.1%	5.4%	4.4%	4.6%	5.7%	-0.1%	8.37
8	3	7.97%	1.95%	2.37	-0.2%	9.37	3.37	1.8%	3.8%	4.57	1.7%	2.0%	9.5%	4.7%	-0.2%	10.0%	9.0%	7.97	2.1%	10.2%	6.9%	0.7%	4.1%	6.47
3	4 5	3.16%	5.02%	8.1%	6.0%	7.0%	3.0%	8.3%	5.3%	0.1%	10.37	3.6%	6.0%	9.2%	3.0%	8.1%	3.8%	4.37	4.9%	5.6%	8.9%	1.2%	7.2%	3.87
10	6	4.10%	9.72%	0.7%	2.1%	0.1%	5.6%	1.8%	10.6%	9.5%	2.9%	10.0%	5.1%	2.0%	9.1%	3.37	7.6%	9.3%	10.6%	10.2%	7.3%	9.6%	6.8%	8.87
12	7	3.14%	5.79%	7.4%	3.8%	0.8%	2.3%	0.3%	5.4%	8.1%	4.27	9.6%	6.9%	8.5%	2.8%	9.3%	4.77	2.0%	-0.1%	4.5%	2.4%	8.2%	4.9%	6.1%
13	8	7.51%	-0.13%	10.7%	8.1%	6.9%	7.4%	7.7%	4.07	9.0%	3.2%	0.1/	8.4%	3.4%	2.8%	1.1%	4.4%	6.7%	2.37	5.9%	9.6%	2.2%	0.1%	0.37
15	10	1.60%	10.91%	9.67	4.17	1.6%	5.9%	4.97	7.27	10.7%	1.5%	2.5%	3.27	1.47	2.67	0.3%	7.9%	3.37	10.3%	2.87	10.0%	4.4%	8.1%	3.37
16	11	8.01%	1.63%	1.7%	4.7%	9.6%	8.2%	8.4%	1.9%	5.6%	6.1%	5.3%	4.3%	-0.3%	1.5%	9.3%	6.7%	9.1%	5.1%	0.8%	2.6%	9.8%	7.2%	1.0%
17	12	4.83%	8.23%	0.0%	6.9%	3.7%	6.0%	3.5%	5.67	9.2%	7.6%	4.0%	9.0%	7.8%	10.1%	-0.2%	1.7%	8.5%	2.1%	0.1%	0.2%	10.8%	3.3%	1.07
19	14	5.41%	1.21%	1.9%	5.0%	7.7%	6.7%	-0.2%	2.67	4.6%	7.1%	8.8%	2.2%	8.0%	4.3%	6.8%	6.5/	3.9%	4.5%	0.3/	0.2%	3.8%	5.5%	8.27
20	15	10.85%	9.86%	5.8%	10.1%	2.5%	1.8%	9.5%	6.2%	0.7%	0.6%	1.2%	9.2%	1.6%	0.0%	3.1%	0.9%	10.7%	8.9%	1.1%	1.4%	1.3%	3.7%	9.87
21	16	9.97/	8.75%	10.2%	3.5%	8.6%	4.1%	1.4%	0.1%	8.4%	0.5%	7.9%	1.7%	8.4%	4.5%	6.3%	3.3%	10.3%	2.2%	3.0%	0.8%	9.3%	0.7%	1.97
23	18	-0.03%	5.47%	2.1%	1.8%	1.47	2.9%	5.6%	3.7%	10.17	7.8%	1.1%	6.7%	0.4%	1.9%	7.3%	6.5%	4.37	2.37	8.3%	3.4%	4.5%	6.1%	10.87
24	19	3.56%	3.27%	1.1%	1.97	4.0%	7.9%	10.4%	2.27	1.7%	2.6%	7.47	2.7%	0.9%	8.1%	3.3%	2.8%	6.5%	7.7%	5.4%	6.2%	8.2%	1.0%	7.27
25	20	5.41%	4.07%	2.2%	3.2%	1.4%	3.8%	5.2%	5.7%	2.9%	6.7%	0.3%	5.3%	2.4%	3.87	3.0%	8.9%	6.5%	8.37	7.2%	0.3%	4.7%	7.7%	4.27
20	22	7.53%	7.377	0.37	6.4%	7.37	7.1%	9.4%	0.7%	6.7%	6.07	6.8%	1.4%	2.5%	3.0%	5.77	-0.1%	4.47	0.5%	4.37	3.4%	3.67	0.2%	2.67
28	23	7.69%	9.28%	9.0%	5.6%	3.7%	2.7%	4.1%	3.1%	4.6%	0.6%	8.7%	3.6%	7.2%	2.3%	4.8%	8.5%	4.77	5.4%	8.1%	6.3%	3.2%	2.9%	4.57
23	24	9.97%	5.37%	1.6%	8.5%	6.87	4.4%	4.6%	0.3/	4.8%	2.1%	7.1%	8.2%	7.2%	2.3%	6.0%	3.0%	10.1%	8.5%	10.2%	1.6%	3.2%	4.2%	4.47
31	20	0.2171	1.40/1	-0.171	J.27.	0.07.	0.171	0.271	2.07	0.071	1.4/1	0.171	0.071	0.471	0.071	1.071	0.071	0.171	4.4/1	0.071	0.071	4.071	2.071	1.07
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This process is repeated for each of the 48 data series applying and the detailed 4,800 iterations are set out in the excel file 'simulations.xls' attached to this report.

Diagram 18 below sets out the systematic risk variable (or "scenario") input component of the Cash Flow Model.

	٨	р	C				<u> </u>	ц	1		L K		м
20	A	B				DDD	DMD		DT	J	Талия	TDD	
20	rear	2 579/	2 CE9/	NIR 6 249/	DIS Rate	RDP	RINK	RA	RII	GPR 6.25%	1 erm	IKK	DDR
21	1	2.57%	3.65%	6.31%	6.31%					6.25%	20		
22	2	2.57%	3.65%	6.31%	6.31%					6.25%	20		
23	3	2.57%	3.65%	6.31%	6.31%					6.25%	20		
24	4	2.57%	3.65%	6.31%	6.31%					6.25%	20		
25	5	2.57%	3.65%	6.31%	6.31%					6.25%	20		
26	6	2.57%	3.65%	6.31%	6.31%					6.25%	20		
27	7	2.57%	3.65%	6.31%	6.31%					6.25%	20		
28	8	2.57%	3.65%	6.31%	6.31%					6.25%	20		
29	9	2.57%	3.65%	6.31%	6.31%					6.25%	20		
30	10	2.57%	3.65%	6.31%	6.31%					6.25%	20		
31	11	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
32	12	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
33	13	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
34	14	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
35	15	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
36	16	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
37	17	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
38	18	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
39	19	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
40	20	2.57%	3.65%	6.31%	6.31%					6.25%	20	5.00%	5.00%
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Diagram 18: Risk Variables In The Model

The systematic risk variables and the columns to which they relate are:

- CPI (Column B);
- Real Income Growth (Column I);
- Real Interest Rates {Column C = [(1 + Bond Rate) Divided By (1+ CPI)] -1};
- Nominal Interest Rates (Column D -Commonwealth Bond Rates plus any margin);
- Real Dwelling Prices (Column F);
- Rental Yields (Column J); and
- Real Cost Growth (Columns G and H).

Each iteration for each risk variable for each city is entered into the cash flow Model to generate 100 scenarios (i.e. iteration 1 for each series is entered into the table above). This process is repeated 100 times for each city and then the results of a mixed strategy (i.e. 25% of each option added together); and the best two assistance options (50% of the best two added together); compared with a single option and the current Commonwealth funding mix (see Table 9, below). To the extent that the polycentric option is more efficient than the monocentric or current Commonwealth funding mix in a statistically significant number of cases, then the efficiency argument is proven. The average difference in the total number of better cases will be the extent of the efficiency gain so achieved.

Assumption Issues and The Standard Case

The Standard Case

Notwithstanding the use of appropriate data it will still be necessary to make a series of assumptions which, in order to ensure option neutrality, are common to all options tested. These common assumptions are:

- the systematic risk in the future is the same as that which applied to the past;
- defaults apply to all options at the vacancy rate provided for public housing;
- the commencing dwelling value is that provided by all States for public housing average costs;
- prepayments are the same in every case;
- the maximum payment of the client including maintenance and rates expenditure is 25% of gross income p.a;
- the term of the standard case transaction is 25 years;
- 4% of the tenants/purchasers leave and 4% of the dwellings are sold (where relevant), at the same rate every year until the end of the transaction.

Specific Assumptions

The assumptions that must be specific are:

For the home loan option the margin for loan origination is set at 0.35% of the original loan principal (once off) and for management costs, at 0.53% pa recurring of the principal outstanding. This cost is added to the real interest rate assessed for the borrower and is expected to be fully recovered. This is the average cost over a period of years derived from the Annual Reports of Homestart (South Australian Government Home Lending Authority), the Department of Human Services, Victoria and the Home Purchase Assistance Authority of New South Wales.

Variations to Be Tested

For each capital city the mean, first, and third quartile cases arising out of the simulations has also been tested for:

- 15 and 35 years;
- household incomes of
 - \$15,000 per annum; and
 - \$35,000 per annum.

ATTACHMENT 3: HOUSING COST: DATA SOURCES

Variable	S.A.	Vic.	NSW	ACT	Tas.	W.A.	Ν.Τ.	Qld
Construction Cost	79	109	91	140	89	104	151	100
Purchasing Cost	125	125	171	104	117	103	117	133
Mean/Median	102	117	131	122	103	104	134	117
Indexed Value	110.0	140.5	149.5	141.6	112.0	111.9	146.7	118.7

Table 1: Dwelling Prices: \$000's December 2000

Productivity Commission, 2000, *Report On Government Services*, Table 15.4 Page 1390 Real Estate Institute Of Australia, 2000, *Market Facts, December 2000*, Table 3, Page 4

Table 2: Operating And Administration Cost Percentages.

Variable	S.A.	Vic.	NSW	ACT	Tas.	W.A.	Ν.Τ.	Qld
Market Val. Public Housing: \$M's	3,063	5,374	12,976	1,207	695	2,452	785	4,005
Total Pub. Housing Dwellings: 000's	51.4	64.5	123.3	11.2	12.9	31.3	7.0	48.5
Av. Dwell. Val. \$000's	59.6	83.2	105.2	108.1	53.8	78.2	112.4	82.5
Operating Costs Per Dwelling, Inclusive	2,991	1,956	2,664	3,347	3,326	2,685	6,472	2,558
Int. Cost \$M's	53.4	67.5	68.6	6.60	15.9	67.8	39.52	13.3
Disposals Cost \$M's			2.03					2.80
Operating Costs - Interest & Disposals	1,951	911	2,091	2,756	2,092	523	814	2,226
Administration Costs Per Dwelling	912	749	1,054	944	1,492	834	389	845
Operating Costs % Of 1999 Dwelling Value	3.3	1.1	2.0	2.5	3.9	0.7	0.7	2.7
Administration Costs % Of 1999 Dwelling Value	1.5	0.9	1.0	0.9	2.8	1.1	0.3	1.0
2000 Dwelling Value	110.0	140.5	149.5	141.6	112.0	111.9	146.7	119.0
Operating Costs % Of Dec. 2000 Dwell. Val.	1.9	0.7	1.5	2.1	2.0	0.5	0.6	2.0
Administration Costs % Of Dec 2000 Dwell. Val.	0.9	0.6	0.8	0.7	1.4	0.8	0.3	0.8

Source: PRODUCTIVITY COMMISSION, 2000, *Report On Government Services*, Housing Attachment, Table 15A.2 Page 1421

PRODUCTIVITY COMMISSION, 2000, Report On Government Services, Table 15.5 Page 1392 PRODUCTIVITY COMMISSION, 2000, Report On Government Services, Table 15.4 Page 1390 REAL ESTATE INSTITUTE OF AUSTRALIA, 2000, Market Facts, December 2000, Table 3, Page 4 DEPARTMENTS OF HOUSING ALL STATES, 1999/2000 Annual Reports & Unpublished data.

Table 3: Private Market Rental Yields And Vacancy Rates: December 20000

Variable	S.A.	Vic.	NSW	ACT	Tas.	W.A.	N.T.	Qld
Median Dwelling Prices: \$000's	158.2	270.0	305.0	115.0	187.0	137.0	179.8	145.0
Median Rents: \$000's p.a.	8.00	12.39	16.38	8.15	11.31	9.62	12.50	10.05
Median Rental Yields: %	5.06	4.59	5.37	7.08	6.05	7.02	6.94	6.93
Vacancy Rates: %	3.80	3.50	2.80	2.30	2.40	3.20	7.00	2.50

Source: REAL ESTATE INSTITUTE OF AUSTRALIA, 2000, Market Facts, December 2000, Pages 9-25

Variable	S.A.	Vic.	NSW	ACT	Tas.	W.A.	Ν.Τ.	Qld
Total Public Dwellings; 000's	53.5	66.0	127.5	11.7	13.4	32.7	7.4	50.6
Occupied & Untenantable Dwellings: 000's	52.1	65.3	127.1	11.6	13.2	32.4	7.4	50.3
Effective Vacancy Rate %	2.60	1.06	0.31	0.68	1.60	0.91	0.38	0.65
Households Transferring: 000's	1.043	2.242	5.628	0.357	0.363	1.776	0.305	1.713
Tenant Relocation Rate %	1.95	3.40	4.41	3.04	2.71	5.43	4.09	3.38

Table 4: Public Tenant Vacancy And Relocation Rates. 1999-2000

Source: PRODUCTIVITY COMMISSION OF AUSTRALIA, 2001, *Report On Government Services 2001*, Attachment 16A, Table 16A.1

ATTACHMENT 4: DATA DEFINITIONS: SYSTEMATIC RISK DATA

"Commencing Nominal Long Term Interest Rates"

Is the interest rate used for the fixed rate bond and home loan bonds as derived from the Reserve Bank Of Australia Bulletin (F) F Group Financial Markets Monthly Series 1983- December 2001 and then derived from the Latin Hypercube simulation of this series.

"Fixed Interest Rate"

Is the coupon applying to 10 year Commonwealth Fixed Rate Bonds as specified in the Reserve Bank Of Australia Bulletin (F) F Group Financial Markets Monthly Series 1983- December 2001 and then derived from the Latin Hypercube simulation of this series, and is the same as the first period number in the Commencing Nominal Long Term Interest Rates.

"Home Loan Interest Rate"

Is the interest rate used for the fixed rate bond and home loan bonds, as derived from the Reserve Bank Of Australia Bulletin (F) F Group Financial Markets Monthly Series 1983- December 2001 plus the annual percentage of mortgage principal outstanding attributed to mortgage administration costs and then derived from the Latin Hypercube simulation of this series.

"Short Term Interest Rate"

is the interest rate applying to ninety day bank bills as specified in the Reserve Bank Of Australia Bulletin (F) F Group Financial Markets Monthly Series 1983- December 2001 and then derived from the Latin Hypercube simulation of this series and as used to calculate the either short term interest earnings or the interest charged on short term borrowings.

"Consumer Price Index"

Is the inflation rate for each of the capital cities derived from the Australian Bureau Of Statistics Data Series 6401.0 Consumer Price Index Australia for the three capital cities for the period 1982 –2001, and then derived from the Latin Hypercube simulation of this series.

"Household Income Index"

Is an Index created from the figures for Average Weekly Ordinary Time Earnings as derived from the Australian Bureau Of Statistics Data Series 6302 Average Weekly Earnings Australia for all States and the Territories for the period 1982 –2001, and then derived from the Latin Hypercube simulation of this series.

"Housing Cost Index"

Is the producer price index for materials used in house building for each of the capital cities derived from the Australian Bureau Of Statistics Data Series 6427.0 Producer Price Indexes Australia, Table 18, for the all capital cities for the period 1982 –2001, (with the exception of Darwin for which tables are not produced and the weighted average of the six capital cities has be used as a proxy), and then derived from the Latin Hypercube simulation of this series.

"Gross Private Rental Yields"

are the mean of the median weekly rents for both houses and units multiplied by 52 and divided by the mean of the median houses and unit prices, (expressed as an annual percentage), for all capital cities and as set out in the Real Estate Institute of Australia's Market Facts, series 1982 December 2001 and then derived from the Latin Hypercube simulation of this series.

"Real Interest Rate"

is the difference between the assumed CPI and the nominal long term interest rate generated by each of the simulations and expressed as the formula

(1+NIR)/(1+CPI)-1

where:

NIR equals the nominal long term interest rate for the period; and

CPI equals the Consumer Price Index for the period.

For example if the nominal long term interest rate is 6.31% and CPI is 2.57% the result is

(1+0.0631)/(1+0.0257)-1 = 3.646%

"Real Income Growth Rates"

are the housing income percentage change per quarter as derived from the Index created from the figures for Average Weekly Ordinary Time Earnings as derived from the Australian Bureau Of Statistics Data Series 6302 Average Weekly Earnings Australia all States and Territories for the period 1982 –2001. This series is then subject to Latin Hypercube simulations and the resultant house price index number is then derived from the combination of the derived CPI and the derived income growth Index expressed as the formula:

(1+IGI)/(1+CPI)-1

where:

IGI equals the percentage change in incomes for the period; and

CPI equals the Consumer Price Index for the period.

For example if the percentage change in incomes for the period is 4% and CPI is 2.57% the result is

(1+0.04)/(1+0.0257)-1 =1.394%

"Real House Prices"

are the house price percentage change per quarter for all capital cities as derived from the Australian Bureau Of Statistics series 6416.0 Table 2B, established house price index: eight capital cities, June 1986 December 2001. This series is then subject to Latin Hypercube simulations and the resultant house price index number is then derived from the combination of the derived CPI and the derived house price Index expressed as the formula:

(1+HPI)/(1+CPI)-1

where:

HPI equals the percentage change in house prices for the period; and

CPI equals the Consumer Price Index for the period.

For example if the percentage change in house prices for the period is 5% and CPI is 2.57% the result is

(1+0.05)/(1+0.0257)-1 =2.369%

"Real Maintenance and Administration Cost Rates"

are the housing cost percentage change per quarter as derived the producer price index for materials used in house building for each of the capital cities derived from the Australian Bureau Of Statistics Data Series 6427.0 Producer Price Indexes Australia. This series is then subject to Latin Hypercube simulations and the resultant house price index number is then derived from the combination of the derived CPI and the derived housing cost index expressed as the formula:

(1+HCI)/(1+CPI)-1

where:

HCI equals the percentage change in housing costs for the period; and

CPI equals the Consumer Price Index for the period.

For example if the percentage change in housing costs for the period is 1.5% and CPI is 2.57% the result is;

(1+0.015)/(1+0.0257)-1 = -1.043%

"Discount Rate: Public Housing"

In order to ensure absolute consistency in the analysis it is important that the discount rate for capital funding exactly replicates the cost of funds in the debt option.

As the debt model calculates a capital injection such that the balance at the end is zero in essence the cost of funds in each period is the weighted average of the bond interest payment and the short term borrowing payment (if any). The annual effective cost of funds can be represented by the formula:

((BIP/(BIP+STI))*(BIR) + ((STI/(BIP+STI))*(STR)

where

BIP = Bond Interest Payment Amount

STI = Short Term Interest Payment Amount

BIR = Annual Bond Interest Rate

STR = Annual Short Term Interest Rate

So for example if the Bond Interest Payment Amount is \$100, Short Term Interest Payment Amount is \$50, the Annual Bond Interest Rate is 6.17% and the Annual Short Term Interest Rate is 6.62% the weighted average cost of funds for the guarterly period is:

100/150 = 0.66*6.17% = 4.11% + 50/150 = 0.33*6.62% = 2.220% = 6.333% and for the guarterly rate divide by 4 = 1.583%

The weighted average cost of funds for the debt model is calculated for each quarter and for that quarter this is the cost of funds allocated as the discount rate for the capital funding option. If the cost of funds varies from period to period, for any particular period the model automatically calculates the cumulative weighted average discount rate to apply to the present valuing of the capital funding model net cash flow. In this way the cost of funds for the capital funding model is maintained exactly the same as the cost of funds in the debt funded option.

"Discount Rate Tax Receipts"

is the annual percentage rate assumed for the purposes of discounting the value of the direct tax receipts received by government to a present value.

ATTACHMENT 5: SYSTEMATIC RISK DATA: TIME SERIES

Table 1: Adelaide: 1980-2001

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-80	46.00						43.7
Jun-80	47.40						45.2
Sep-80	48.00						47.2
Dec-80	49.00						48.4
Mar-81	50.30		13.10	11.50			49.6
Jun-81	51.50		13.10	11.50			50.6
Sep-81	52.60		14.03	11.83			51.8
Dec-o1 Mar-82	55.50		15.00	12.50			52.9
lun_82	56.90		16.00	13.50			57.00
Son-82	58.90		16.00	13.50			58.90
Dec-82	60.50		14.38	13.50			60.00
Mar-83	62.20		13.67	12.83		9.65	61.50
Jun-83	63.90		13.97	12.50		10.04	63.10
Sep-83	64.80		14.55	12.33		10.15	64.00
Dec-83	66.10	337.80	13.37	12.00		10.19	65.00
Mar-84	66.10	342.20	13.87	11.50		9.89	66.40
Jun-84	66.20	352.20	13.93	11.50		9.23	67.80
Sep-84	66.90	359.00	13.02	11.50		8.74	69.40
Dec-84	68.30	362.20	13.28	11.50		8.38	70.70
Mar-85	69.30	366.70	13.53	11.50		7.99	71.60
Jun-85	71.10	371.20	13.75	12.00		7.94	74.20
Sep-85	72.60	376.20	13.72	12.67		7.69	75.60
Dec-85	74.10	385.60	14.82	13.50		7.61	76.70
Mar-86	75.20	393.50	13.47	13.50		7.72	77.50
Jun-86	/6.70	397.50	12.62	15.50	100.00	7.81	/8.60
Sep-86	79.00	409.50	14.05	15.50	98.60	7.94	79.50
Dec-ob Mar-87	82.40	409.10	13.55	15.50	99.49	0.00	81.60
lun_87	83.70	412.00	12.95	15.50	99.90	8 20	82.50
Sep-87	84 70	428.20	12.33	15.00	100.37	8.27	82.80
Dec-87	86.40	434.10	13.27	14.17	101.97	8.22	83.70
Mar-88	87.60	442.70	12.20	13.67	103.27	8.23	86.40
Jun-88	89.10	448.50	11.92	13.50	104.62	8.13	88.70
Sep-88	90.80	453.10	11.90	14.50	105.66	7.91	90.70
Dec-88	92.30	462.70	12.40	14.67	110.46	7.53	92.00
Mar-89	94.20	467.50	13.53	15.50	110.90	7.42	94.10
Jun-89	96.00	479.60	13.60	16.33	111.13	7.22	96.10
Sep-89	97.70	487.60	13.32	17.00	115.83	7.20	97.30
Dec-89	99.20	494.60	13.18	17.00	120.58	7.05	99.30
Mar-90	100.60	502.30	13.18	17.00	118.89	7.18	100.60
Son 90	102.50	513.10	13.30	16.50	121.09	7.41	102.90
Dec-90	105.00	535.70	12.45	15.50	122.90	7.42	103.70
Mar-91	106.30	546.20	12.55	14.50	130.22	7.34	104.50
Jun-91	107.30	546.90	10.97	13.83	124 62	7.30	106.00
Sep-91	108.00	551.80	10.66	13.00	123.00	7.09	105.80
Dec-91	108.80	564.50	9.66	12.33	124.20	7.00	105.10
Mar-92	109.50	574.70	10.01	11.33	127.56	6.95	103.70
Jun-92	109.40	580.30	9.15	10.83	125.64	6.94	103.30
Sep-92	110.10	582.90	8.74	10.17	126.14	6.85	104.00
Dec-92	110.70	584.40	8.98	10.00	124.50	6.63	104.40
Mar-93	111.60	584.30	8.13	10.00	129.36	6.58	106.50
Jun-93	112.30	589.80	7.54	9.67	134.86	6.43	110.10
Sep-93	112.70	603.30	6.79	9.25	125.42	6.37	114.40
Dec-93	112.80	599.40	0.00	<u>8.75</u>	124.67	6.29	117.20
Mar-94	113.60	596.70	7.12	8.75	120.07	0.38	118.20
Son-04	114.40	602.20	0.90	0.75 0.00	127.00	0.33	110.00
Dec-94	116.00	500 10	9.73 10.34	9.00	130.02	6.28	118.80
Mar-95	117.80	619.10	10.03	10.50	129.31	6.30	119.40
Jun-95	118.80	612.10	9.28	10.50	128.80	6.37	118.80
Sep-95	120.10	613.50	8.99	10.50	127.70	6.36	118.40
Dec-95	121.10	617.00	8.38	10.50	124.76	6.40	118.00
Mar-96	121.60	625.30	8.49	10.50	125.01	6.47	118.00
Jun-96	122.00	634.10	8.82	10.25	125.21	6.43	118.30
Sep-96	122.20	632.30	8.05	9.42	125.08	6.57	119.60
Dec-96	122.60	640.50	7.31	8.75	123.83	6.69	120.40
Mar-97	122.60	648.40	7.70	7.78	126.23	6.63	120.80
Jun-97	121.90	656.20	7.45	(.32	125.85	6.61	121.50
Sep-97	121.20	663.70	6.35	6.87	126.74	6.48	122.40
1 Dec-9/	121.20	000.40	0.07	0.70	121.04	0.43	122.90

Table 1: Adelaide: 1980-2001 (continued)

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-98	121.70	682.20	5.88	6.70	131.34	6.49	123.70
Jun-98	122.40	681.10	5.62	6.70	130.94	6.63	124.10
Sep-98	123.00	695.00	5.51	6.70	130.44	6.80	124.40
Dec-98	123.60	702.50	4.99	6.63	130.31	6.82	125.20
Mar-99	122.70	697.90	5.35	6.50	131.09	6.96	125.10
Jun-99	123.60	701.30	5.93	6.50	133.59	6.98	125.20
Sep-99	125.10	702.50	6.30	6.55	137.74	6.87	125.50
Dec-99	125.70	705.00	6.74	6.72	139.94	6.88	126.00
Mar-00	126.80	721.30	6.72	7.13	141.24	6.76	127.50
Jun-00	127.60	728.90	6.27	7.72	145.05	6.75	129.70
Sep-00	132.30	745.90	6.24	7.97	145.92	6.86	129.80
Dec-00	132.50	765.40	5.80	8.05	145.62	6.71	129.70
Mar-01	134.10	768.30	5.28	7.63	152.32	6.75	129.40
Jun-01	135.10	783.40	5.95	6.80	156.28	6.63	129.50
Sep-01	135.30	792.00	5.71	6.72	159.38	6.51	128.40
Dec-01	136.60	795.00	5.61	6.22	165.92	6.46	130.10

SOURCES

- 1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)
- 2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12D, South Australia, seasonally adjusted
- 3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 capital market yields
- 4. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 indicator lending rates.
- 5. Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes
- 6. Real Estate Institute Of Australia, "Market Facts", 1982 2001
- 7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

Table 2: Melbourne: 1980-2001

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-80	45.20						43.20
Jun-80	46.60						45.20
Sep-80	47.50						47.20
Dec-80	48.50						47.80
Mar-81	49.60		13.10	11.50			49.00
Jun-81	50.70		13.10	11.50			50.00
Sep-81	51.80		14.63	11.83			50.90
Dec-81	54.10		15.00	12.50			51.90
Mar-82	54.80		15.08	12.67			53.70
Jun-82	56.10		16.00	13.50			55.60
Sep-82	58.10		16.03	13.50			57.00
Dec-82	59.60		14.38	13.50			57.60
Mar-83	60.90		13.67	12.83		10.18	59.30
Jun-83	62.60		13.97	12.50		9.78	60.40
Sep-83	63.60		14.55	12.33		9.53	61.50
Dec-83	65.50	343.70	13.37	12.00		9.64	63.20
Mar-84	65.10	352.40	13.87	11.50		9.51	65.20
Jun-84	65.30	365.50	13.93	11.50		9.33	67.30
Sep-84	66.30	369.60	13.02	11.50		8.97	68.50
Dec-84	67.10	372.30	13.28	11.50		8.65	69.20
Mar-85	67.90	375.20	13.53	11.50		8.54	70.00
Jun-85	69.90	381.90	13.75	12.00		8.30	71.90
Sep-85	71.40	388.30	13.72	12.67		8.26	73.20
Dec-85	72.60	394.80	14.82	13.50		8.15	74.40
Mar-86	74.60	401.80	13.47	13.50		7.93	75.70
Jun-86	75.70	407.70	12.62	15.50	101.60	7.86	76.40
Sep-86	77.70	416.20	14.05	15.50	103.23	7.88	77.40
Dec-86	80.00	426.10	13.53	15.50	103.84	7.93	78.80
Mar-87	81.50	432.70	13.75	15.50	105.54	8.02	79.40
Jun-87	82.80	440.70	12.95	15.50	105.86	8.03	81.10
Sep-87	84.30	448.00	12.80	15.17	111.58	8.22	82.40
Dec-87	85.70	452.30	13.27	14.17	113.18	7.94	84.40
Mar-88	87.00	465.40	12.20	13.67	115.55	7.74	86.50
Jun-88	88.60	470.00	11.92	13.50	125.84	7.38	89.20
Sep-88	89.90	477.20	11.90	14.50	137.54	6.85	91.10
Dec-88	91.50	485.10	12.40	14.67	150.06	6.71	93.10
Mar-89	92.70	494.30	13.53	15.50	153.66	6.41	95.30
Jun-89	95.20	501.40	13.60	16.33	153.36	6.33	97.40
Sep-89	97.30	510.20	13.32	17.00	155.50	6.10	97.90
Dec-89	99.20	518.50	13.18	17.00	154.26	6.03	99.40
Mar-90	100.70	525.30	13.18	17.00	154.86	5.96	100.60
Jun-90	102.70	537.40	13.56	16.50	148.05	5.81	102.00
Sep-90	103.50	545.50	13.43	16.42	150.27	5.80	102.70
Dec-90	106.60	556.00	12.55	15.50	145.77	5.69	103.00

Table 2: Melbourne: 1980-2001 (continued)

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-91	106.10	564.00	11.48	14.50	147.95	5.76	104.00
Jun-91	106.80	565.20	10.97	13.83	154.76	5.77	104.10
Sep-91	107.60	568.70	10.66	13.00	152.96	5.73	103.90
Dec-91	108.40	579.40	9.66	12.33	146.08	5.81	102.40
Mar-92	108.30	583.30	10.01	11.33	143.88	5.82	102.30
Jun-92	108.20	583.50	9.15	10.83	144.78	5.96	102.80
Sep-92	107.90	590.30	8.74	10.17	148.26	6.06	103.60
Dec-92	108.20	586.80	8.98	10.00	146.04	6.03	104.50
Mar-93	109.50	593.90	8.13	10.00	147.24	6.05	106.20
Jun-93	110.10	595.30	7.54	9.67	147.38	5.92	108.50
Sep-93	110.50	603.00	6.79	9.25	150.48	5.80	110.30
Dec-93	110.80	600.10	6.66	8.75	149.38	5.77	111.70
Mar-94	111.20	603.70	7.12	8.75	151.77	5.63	112.70
Jun-94	112.00	615.90	8.95	8.75	153.13	5.62	113.60
Sep-94	112.20	617.50	9.75	9.00	153.83	5.60	114.40
Dec-94	113.10	626.80	10.34	9.85	153.99	5.56	115.60
Mar-95	115.00	633.80	10.03	10.50	154.91	5.59	116.50
Jun-95	116.20	641.70	9.28	10.50	153.21	5.59	117.00
Sep-95	117.60	645.40	8.99	10.50	153.82	5.72	115.90
Dec-95	118.50	652.60	8.38	10.50	153.52	5.81	115.30
Mar-96	118.30	659.20	8.49	10.50	155.62	5.81	115.10
Jun-96	119.20	664.70	8.82	10.25	156.08	5.97	115.10
Sep-96	119.60	662.80	8.05	9.42	158.89	6.05	114.90
Dec-96	119.90	679.90	7.31	8.75	158.99	6.06	115.20
Mar-97	120.10	687.70	7.70	7.78	162.65	6.09	115.10
Jun-97	119.90	692.40	7.45	7.32	169.32	6.08	115.80
Sep-97	119.50	710.90	6.35	6.87	174.62	5.76	116.10
Dec-97	119.80	706.70	6.07	6.70	177.94	5.70	116.60
Mar-98	119.60	716.80	5.88	6.70	185.05	5.67	117.60
Jun-98	120.30	724.00	5.62	6.70	185.85	5.55	118.00
Sep-98	120.40	729.80	5.51	6.70	191.06	5.64	118.60
Dec-98	120.80	735.30	4.99	6.63	196.60	5.61	118.10
Mar-99	121.00	728.80	5.35	6.50	200.60	5.48	117.70
Jun-99	121.50	740.50	5.93	6.50	206.82	5.27	117.40
Sep-99	122.70	741.60	6.30	6.55	216.12	4.44	119.20
Dec-99	123.50	749.60	6.74	6.72	217.62	4.21	120.50
Mar-00	124.70	761.10	6.72	7.13	226.33	4.02	122.90
Jun-00	125.60	766.00	6.27	7.72	214.33	3.90	124.20
Sep-00	130.40	782.10	6.24	7.97	224.03	4.42	123.20
Dec-00	130.80	775.80	5.80	8.05	230.08	4.36	123.40
Mar-01	132.20	793.90	5.28	7.63	246.42	4.29	122.80
Jun-01	133.00	799.80	5.95	6.80	254.42	4.17	123.10
Sep-01	133.60	817.10	5.71	6.72	257.98	3.96	124.30
Dec-01	134.80	829.10	5.61	6.22	296.86	3.85	124.40

SOURCES

- 1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)
- 2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12B, Victoria, seasonally adjusted
- 3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 capital market yields
- 4. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 indicator lending rates
- 5. Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes
- 6. Real Estate Institute Of Australia, "Market Facts", 1982 2001
- 7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.
Table 3: Sydney: 1980-2001

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-80	45.50						44.90
Jun-80	46.70						46.80
Sep-80	47.60						48.20
Dec-80	48.60						49.10
Mar-81	49.90		13.10	11.50			50.00
Jun-81	50.90		13.10	11.50			51.30
Sep-81	51.80		14.63	11.83			52.10
Dec-81	53.90		15.00	12.50			53.10
Mar-82	54.90		15.08	12.67			54.70
Jun-82	56.50		16.00	13.50			56.20
Sep-82	58.50		16.03	13.50			57.20
Dec-82	60.30		14.38	13.50			57.90
Mar-83	61.60		13.67	12.83		7.40	58.60
Jun-83	62.80		13.97	12.50		7.21	59.80
Sep-83	63.60		14.55	12.33		7.12	60.40
Dec-83	64.90	375.40	13.37	12.00		7.15	60.90
Mar-84	64.60	382.20	13.87	11.50		7.34	62.30
Jun-84	64.60	393.20	13.93	11.50		7.55	63.80
Sep-84	65.40	401.00	13.02	11.50		7.70	64.80
Dec-84	66.40	406.70	13.28	11.50		7.82	66.00

Table 3: Sydney: 1980-2001 (continued)

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-85	67.40	409.50	13.53	11.50		7.85	67.20
Jun-85	68.80	412.90	13.75	12.00		8.09	69.50
Sep-85	70.30	416.60	13.72	12.67		8.45	70.60
Dec-85	71.90	426.30	14.82	13.50		8.63	71.50
Mar-86	73.60	436.70	13.47	13.50		8.79	72.20
Jun-86	74.90	440.10	12.62	15.50	100.00	8.41	73.20
Sep-86	76.70	454.70	14.05	15.50	100.60	8.23	74.50
Dec-86	78.90	457.20	13.53	15.50	101.71	8.18	76.20
War-67	80.50	458.70	13.75	15.50	105.94	0.44	70.80
Son 87	83.20	462.70	12.95	15.50	105.34	9.28	78.00
Dec-87	84 60	477.00	13.27	14 17	115.90	9.54	81.00
Mar-88	86.50	486.80	12.20	13.67	123.00	9.07	83.10
Jun-88	87.80	497.30	11.92	13.50	135.92	8.03	86.60
Sep-88	90.10	504.50	11.90	14.50	155.08	7.05	88.30
Dec-88	92.40	522.30	12.40	14.67	166.38	6.50	91.50
Mar-89	92.50	531.10	13.53	15.50	180.85	6.06	93.40
Jun-89	94.80	545.20	13.60	16.33	181.40	5.67	96.00
Sep-89	97.40	563.40	13.32	17.00	180.90	5.53	98.20
Dec-89	99.20	566.70	13.18	17.00	176.37	5.55	99.30
Mar-90	100.90	574.50	13.18	17.00	178.14	5.61	100.20
Jun-90	102.50	584.60	13.56	16.50	178.44	5.77	102.30
Sep-90	105.10	569.8U	13.43	10.42	177.40	5.94	103.50
Mar-04	105.50	615 10	12.00	10.50	178.30	6.32	104.70
Jun-91	105.70	600.90	10.97	13.83	180.71	6.39	105.50
Sep-91	106.00	618.80	10.66	13.00	185.41	6.29	105.00
Dec-91	107.10	631.60	9.66	12.33	185.61	6.10	104.90
Mar-92	107.00	649.60	10.01	11.33	185.79	5.92	104.70
Jun-92	106.50	649.00	9.15	10.83	187.65	5.90	105.30
Sep-92	106.90	640.40	8.74	10.17	185.65	5.94	105.80
Dec-92	107.40	641.20	8.98	10.00	187.32	5.95	105.70
Mar-93	108.20	636.50	8.13	10.00	190.88	5.94	106.40
Jun-93	108.40	644.30	7.54	9.67	190.58	5.91	109.20
Sep-93	108.70	653.70	6.79	9.25	192.49	5.79	110.30
Dec-93 Mer 04	108.80	651.40	0.00	8.75	191.91	5.//	110.70
War-94	109.10	672.80	8.05	8.75	194.01	5.60	112.70
Sen-94	111 00	679.50	9.75	9.00	202.83	5.55	112.70
Dec-94	111.80	694.30	10.34	9.85	201.13	5.50	114.80
Mar-95	113.70	707.10	10.03	10.50	205.56	5.49	115.50
Jun-95	115.40	723.20	9.28	10.50	202.48	5.53	116.10
Sep-95	117.30	732.10	8.99	10.50	204.78	5.60	116.40
Dec-95	118.30	741.10	8.38	10.50	203.75	5.66	115.60
Mar-96	119.10	740.80	8.49	10.50	204.16	5.70	115.50
Jun-96	119.90	753.00	8.82	10.25	205.26	5.65	116.20
Sep-96	120.20	763.60	8.05	9.42	206.70	5.58	115.90
Dec-96 Mar-97	120.40	760.00	7 70	0./5	207.52	5.37	115.80
Jun-97	120.00	770 40	7.45	7.32	210.72	5.10	117.30
Sep-97	119.80	779.20	6.35	6.87	216.08	5.00	117.80
Dec-97	120.10	788.90	6.07	6.70	217.18	4.95	119.40
Mar-98	120.70	793.50	5.88	6.70	227.38	4.95	120.80
Jun-98	121.40	797.00	5.62	6.70	233.52	4.83	120.70
Sep-98	121.90	809.50	5.51	6.70	232.62	4.76	120.80
Dec-98	122.40	818.60	4.99	6.63	238.91	4.78	121.80
Mar-99	122.60	830.80	5.35	6.50	242.49	4.71	122.00
Jun-99	123.00	842.30	5.93	6.50 6.55	245.19	4.68	121.80
Sep-99	124.10	860.00	0.30	0.55	200.00	4.07	123.70
Dec-99 Mar-00	124.70	871 00	0.74	7 13	200.30	4.09	124.40
Jun-00	127.00	888.90	6.72	7 72	266.82	4.50	131 20
Sep-00	131 60	900.00	6.24	7.97	273 49	4,56	130.00
Dec-00	132.20	903.70	5.80	8.05	272.29	4.58	129.80
Mar-01	134.00	899.50	5.28	7.63	278.28	4.59	129.80
Jun-01	135.00	936.10	5.95	6.80	285.79	4.56	130.20
Sep-01	135.40	956.00	5.71	6.72	292.19	4.48	130.50
Dec-01	136.60	964.80	5.61	6.22	306.80	4 34	131.40
200-01	100.00	304.00	5.01	0.22	500.00	7.34	101.40

SOURCES

1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)

2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12A, New South Wales, seasonally adjusted

3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 - capital market yields

4. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 – indicator lending rates

 Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes – percentage changes

6. Real Estate Institute Of Australia, "Market Facts", 1982 - 2001

7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

Table 4: Canberra

Date	CPI ¹	AWOE ² :\$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁶	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-80	46.10						44.9
Jun-80	47.40						46.8
Sep-80	48.30						48.2
Dec-80 Mar-81	49.40		12.10	11.50			49.1
Jun-81	51.70		13.10	11.50			51.3
Sep-81	52.80		14.63	11.83			52.1
Dec-81	54.90		15.00	12.50			53.1
Mar-82	55.80		15.08	12.67			54.7
Jun-82	57.50		16.00	13.50			56.20
Sep-82	59.30		16.03	13.50			57.20
Dec-82	61.60		14.38	13.50		7.40	57.90
Mar-83	62.90		13.67	12.83		7.43	58.60
Sen-83	64.90		14 55	12.30		7.40	59.60
Dec-83	66.40	396.80	13.37	12.00		7.76	60.90
Mar-84	66.50	403.20	13.87	11.50		7.63	62.30
Jun-84	66.60	425.50	13.93	11.50		7.76	63.80
Sep-84	67.60	422.50	13.02	11.50		7.72	64.80
Dec-84	68.60	431.60	13.28	11.50		7.90	66.00
Mar-85	69.70	431.00	13.53	11.50		8.20	67.20
Jun-85	71.30	436.70	13.75	12.00		8.29	69.50
Sep-oo Dec-85	73.00	440.40	13.72	13.50		8.01	70.00
Mar-86	76.20	469.00	13.47	13.50		8,27	72.20
Jun-86	77.50	471.00	12.62	15.50	100.00	8.42	73.20
Sep-86	79.10	477.00	14.05	15.50	97.36	8.48	74.50
Dec-86	81.10	487.00	13.53	15.50	97.49	8.71	76.20
Mar-87	82.50	489.10	13.75	15.50	96.04	8.71	76.80
Jun-87	83.80	496.10	12.95	15.50	94.40	8.75	78.00
Sep-87	84.90 96.40	503.40 609.60	12.80	15.17	95.95	8.74	79.30
Mar-88	88.10	518.40	12.27	13.67	108.73	8.76	83.10
Jun-88	89.70	527.40	11.92	13.50	108.29	8.47	86.60
Sep-88	90.80	533.00	11.90	14.50	112.04	8.12	88.30
Dec-88	92.40	552.40	12.40	14.67	115.23	7.80	91.50
Mar-89	93.50	554.00	13.53	15.50	118.32	7.48	93.40
Jun-89	95.70	562.20	13.60	15.33	119.20	7.37	96.00
Dec-89	99.30	578.00	13.18	17.00	172.12	7.35	99.30
Mar-90	101.20	589.30	13.18	17.00	122.44	7.27	100.20
Jun-90	102.30	597.50	13.56	16.50	122.52	7.23	102.30
Sep-90	103.10	611.50	13.43	16.42	123.82	7.31	103.50
Dec-90	106.00	628.50	12.55	15.50	127.36	7.41	104.70
Mar-91	105.50	629.10	11.48	19.00	128.46	7.53	105.30
Sep-91	107.00	641.70	10.57	13.00	136.69	7.30	105.00
Dec-91	107.90	654.20	9.66	12.33	138.70	7.20	104.90
Mar-92	108.20	662.60	10.01	11.33	139.63	6.95	104.70
Jun-92	107.90	669.70	9.15	10.83	141.29	6.82	105.30
Sep-92	108.60	673.90	8.74	10.17	143.88	6.75	105.80
Dec-92	109.00	665.80	8.98	10.00	143.99	6.57	105.70
Mar-93	110.10	683.80 600.10	8.13 7.54	10.00	145.92	5.5U 8.57	106.40
Sen-93	111.00	696.10 696.40	6.79	9.07	144.91	5.97	110.20
Dec-93	111.30	690.80	6.66	8.75	145.19	5.88	110.70
Mar-94	111.40	711.30	7.12	8.75	144.99	5.84	111.40
Jun-94	112.00	716.10	8.95	8.75	144.43	5.67	112.70
Sep-94	112.60	714.70	9.75	9.00	143.65	5.49	113.60
Dec-94	113.80	712.90	10.34	9.85	142.71	5.42	114.80
lun-95	117.60	725.00	10.03 q.28	10.50	142.87	5.30	116.00
Sep-95	119.10	740.20	9.20 8.99	10.50	141.92	5.20	116.10
Dec-95	120.00	771.90	8.38	10.50	141.70	5.35	115.60
Mar-96	120.80	762.60	8.49	10.50	140.82	5.40	115.50
Jun-96	121.40	778.70	8.82	10.25	141.04	5.39	116.20
Sep-96	121.40	784.90	8.05	9.42	140.93	5.39	115.90
Dec-96	121.40	792.60	7.31	8.75	140.60	5.40	115.80
Jun-97	121.40	790.00	7.7U 7.45	1./8	139.31	5.37 5.30	110.00
Sep-97	119.80	806.20	6.35	6.87	139.81	5.25	117.80
Dec-97	119.80	820.30	6.07	6.70	140.44	5.10	119.40
Mar-98	120.60	840.00	5.88	6.70	140.95	4.93	120.80
Jun-98	121.20	848.00	5.62	6.70	140.56	4.82	120.70
Sep-98	121.30	861.10	5.51	6.70	140.73	5.85	120.80
Dec-96	121.70	044.00	4.99	0.03	141.34	0.87	121.80

Table 4: Canberra (continued)

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-99	121.40	840.00	5.35	6.50	141.79	5.92	122.00
Jun-99	121.50	842.30	5.93	6.50	142.28	6.06	121.80
Sep-99	122.40	851.20	6.30	6.55	142.39	6.09	123.70
Dec-99	123.70	897.80	6.74	6.72	145.85	6.12	124.40
Mar-00	124.90	893.70	6.72	7.13	147.82	6.15	128.00
Jun-00	125.90	913.20	6.27	7.72	148.79	6.20	131.20
Sep-00	130.70	916.50	6.24	7.97	149.45	6.25	130.00
Dec-00	131.10	939.00	5.80	8.05	150.85	6.32	129.80
Mar-01	132.20	933.00	5.28	7.63	152.70	6.35	129.80
Jun-01	133.40	940.50	5.95	6.80	155.10	6.37	130.20
Sep-01	133.20	953.60	5.71	6.72	157.21	6.31	130.50
Dec-01	134.90	940.90	5.61	6.22	161.23	6.32	131.40

SOURCES

- 1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)
- 2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12H, ACT seasonally adjusted
- 3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 capital market yields
- 4. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 indicator lending rates
- 5. Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes
- 6. Real Estate Institute Of Australia, "Market Facts", 1982 2001
- 7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

Table 5: Hobart

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-80	46.70				· · · · ·		45.40
Jun-80	47.80						47.20
Sep-80	48.90						48.50
Dec-80	49.80						49.20
Mar-81	50.90		13.10	11.50			50.50
Jun-81	52.00		13.10	11.50			51.90
Sep-81	53.30		14.63	11.83			52.60
Dec-81	55.30		15.00	12.50			53.50
Mar-82	56.10		15.08	12.67			55.70
Jun-82	57.20		16.00	13.50			58.10
Sep-82	59.00		16.03	13.50			58.90
Dec-82	61.00		14.38	13.50		0.00	59.40
Iviar-63	62.30		13.07	12.83		0.00	59.70
5un-83	64.20		14.55	12,30		0.00	62.10
Dec-83	65.90	242.20	19.97	12.00		0.00	62.50
Mar-84	65.90	350.20	13.87	11.50		0.00	65.40
Jun-84	66.00	364.30	13.93	11.50		0.00	67.70
Sep-84	66.70	363.20	13.02	11.50		0.00	69.20
Dec-84	68.00	368.20	13.28	11.50		0.00	72.20
Mar-85	69.10	370.20	13.53	11.50		0.00	73.00
Jun-85	70.70	378.50	13.75	12.00		0.00	74.70
Sep-85	72.50	385.30	13.72	12.67		0.00	76.30
Dec-85	74.00	391.00	14.82	13.50		0.00	77.90
Mar-86	75.10	401.10	13.47	13.50		0.00	78.80
Jun-86	76.80	404.10	12.62	15.50	100.00	0.00	79.50
Sep-86	78.80	410.40	14.05	15.50	99.80	0.00	80.60
Dec-86	81.40	418.60	13.53	15.50	100.80	0.00	82.00
Mar-87	83.10	419.50	13.75	15.50	103.82	0.00	82.40
Jun-87	84.40	424.00	12.95	15.50	103.22	0.00	83.10
Sep-87	85.90	432.20	12.80	15.17	102.40	0.00	84.20
Dec-67	07.20	430.10	13.27	19.67	108.73	0.00	85.40
lun-88	90.70	444.00	12.20	13.57	106.83	0.00	89.30
Sep-88	91.10	462.00	11.90	14.50	111 31	0.00	91.10
Dec-88	92.50	476.10	12.40	14.67	114.81	8 45	92.70
Mar-89	94.20	478.10	13.53	15.50	116.77	7.89	94.70
Jun-89	96.00	489.80	13.60	16.33	118.87	7.71	96.40
Sep-89	97.60	493.30	13.32	17.00	120.77	7.85	97.30
Dec-89	99.40	498.90	13.18	17.00	124.15	7.47	99.50
Mar-90	101.00	513.00	13.18	17.00	124.27	7.68	100.60
Jun-90	101.90	520.80	13.56	16.50	124.67	7.91	102.50
Sep-90	103.00	527.00	13.43	16.42	125.05	7.96	103.10
Dec-90	105.50	531.90	12.55	15.50	132.30	8.31	104.30
Mar-91	105.20	535.10	11.48	14.50	131.40	20.38	105.00
Jun-91	105.80	537.20	10.97	13.83	135.66	0.30	105.90
Dec-91	107.40	547.20	9.66	12.33	138.74	8.43	107.40
Mar-92	107.40	552.40	10.00	11.33	139.29	8 4 9	107.90
Jun-92	107.00	560.50	9.15	10.83	137.62	8.42	109.40
Sep-92	107.60	563.80	8.74	10.17	139.82	8.38	109.60
Dec-92	108.00	563.80	8.98	10.00	142.20	8.28	109.60
Mar-93	109.10	567.70	8.13	10.00	144.62	8.16	110.00
Jun-93	109.40	571.60	7.54	9.67	145.32	7.91	110.50
Sep-93	111.00	579.90	6.79	9.25	146.48	7.75	111.70
Dec-93	111.60	586.70	6.66	8.75	148.53	7.69	112.10
Mar-94	111.90	590.70	7.12	8.75	149.83	7.58	113.00
Jun-94	112.40	590.00	8.95	8.75	153.43	7.50	114.20
Sep-94	113.30	800.50	9.75	8.00	156.03	7.38	110.30
Dec-94 Mar-9E	114.20	600.50	10.34	8.85	150.03	7.20	117.00
Jun-95	117.10	607.70	9.28	10.50	157.44	7.04	119.50
Sep-95	118.40	608.30	8.99	10.50	157.53	7.20	120.80
Dec-95	119.20	614.40	8.38	10.50	157.37	7.22	120.80
Mar-96	120.10	619.80	8.49	10.50	158.16	7.31	120.70
Jun-96	120.60	633.90	8.82	10.25	159.26	7.24	120.60
Sep-96	121.10	633.40	8.05	9.42	157.98	7.30	120.50
Dec-96	121.30	646.80	7.31	8 75	155.93	7.42	119.80

Table 5: Hobart (continued)

Date	CPI ¹	AWOE ² :\$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-97	121.90	660.80	7.70	7.78	157.43	7.59	120.10
Jun-97	121.30	664.90	7.45	7.32	150.82	7.75	120.10
Sep-97	120.60	675.40	6.35	6.87	149.16	7.70	120.30
Dec-97	121.20	683.00	6.07	6.70	149.46	7.59	120.60
Mar-98	121.50	689.00	5.88	6.70	156.18	7.50	121.20
Jun-98	122.00	689.60	5.62	6.70	150.56	7.52	122.00
Sep-98	122.80	695.80	5.51	6.70	149.76	7.57	122.50
Dec-98	122.70	696.30	4.99	6.63	147.21	7.63	122.30
Mar-99	122.10	701.50	5.35	6.50	149.57	7.54	122.10
Jun-99	122.50	695.10	5.93	6.50	149.47	7.32	121.90
Sep-99	123.30	706.80	6.30	6.55	151.56	7.17	122.10
Dec-99	124.00	716.10	6.74	6.72	154.59	7.10	122.60
Mar-00	125.30	720.70	6.72	7.13	155.19	7.03	124.60
Jun-00	126.50	740.40	6.27	7.72	162.02	6.87	126.00
Sep-00	131.30	739.40	6.24	7.97	162.18	7.05	125.20
Dec-00	131.20	738.30	5.80	8.05	161.78	7.08	125.60
Mar-01	132.10	743.20	5.28	7.63	161.95	7.18	126.30
Jun-01	133.40	758.70	5.95	6.80	163.56	7.40	127.00
Sep-01	132.80	760.80	5.71	6.72	163.46	7.27	127.30
Dec-01	133.90	775.60	5.61	6.22	167.55	7.27	127.60

SOURCES (Table 5)

- 1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)
- 2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12F, Tasmania seasonally adjusted
- 3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 capital market yields
- Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 indicator lending rates
- 5. Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes
- 6. Real Estate Institute Of Australia, "Market Facts", 1982 2001
- 7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

Table 6: Perth

Date	CPI ¹	AWOE ² :\$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-80	46.10						43.80
Jun-80	47.20						45.50
Sep-80	48.30						47.30
Dec-80	49.00						48.10
Mar-81	50.00		13.10	11.50			49.00
Jun-81	51.10		13.10	11.50			49.80
Sep-81	52.80		14.63	11.83			51.50
Dec-81	55.10		15.00	12.50			52.60
Mar-82	55.70		15.08	12.67			54.40
Jun-82	56.80		16.00	13.50			56.20
Sep-82	58.80		16.03	13.50			57.80
Dec-82	60.40		14.38	13.50			58.40
Mar-83	61.30		13.67	12.83		8.46	59.30
Jun-83	62.40		13.97	12.50		8.40	59.70
Sep-83	64.20		14.55	12.33		8.36	60.50
Dec-83	65.60	299.70	13.37	12.00		8.65	61.80
Mar-84	65.00	305.50	13.87	11.50		8.87	63.10
Jun-84	65.00	313.30	13.93	11.50		9.24	64.30
Sep-84	66.00	313.20	13.02	11.50		9.25	65.20
Dec-84	66.80	322.10	13.28	11.50		9.66	65.80
Mar-85	67.80	329.20	13.53	11.50		9.28	66.40
Jun-85	69.40	338.20	13.75	12.00		9.12	67.80
Sep-85	70.80	345.30	13.72	12.67		9.20	69.10
Dec-85	72.40	347.00	14.82	13.50		8.57	70.50
Mar-86	73.60	354.70	13.47	13.50		8.88	71.80
Jun-86	74.80	354.40	12.62	15.50	100.00	9.79	72.60
Sep-86	77.30	360.40	14.05	15.50	102.10	10.50	73.70
Dec-86	79.70	373.40	13.53	15.50	103.84	11.45	75.00
Mar-87	81.20	374.00	13.75	15.50	104.87	11.91	76.60
Jun-87	82.60	374.10	12.95	15.50	105.87	11.49	77.80
Sep-87	83.80	390.50	12.80	15.17	108.20	11.07	79.20
Dec-87	85.20	389.90	13.27	14.17	110.69	10.55	80.00
Mar-88	86.60	394.20	12.20	13.67	115.59	10.15	81.50
Jun-88	88.10	401.60	11.92	13.50	124.15	9.86	83.70
Sep-88	89.90	410.80	11.90	14.50	136.93	9.22	86.80
Dec-88	91.80	410.70	12.40	14.67	144.53	8.46	89.40
Mar-89	92.70	423.90	13.53	15.50	101.15	7.78	92.70
Jun-89	94.70	435.30	13.60	10.33	172.27	f.15 8.07	95.20
Sep-89	96.90	441.20	13.32	17.00	159.97	6.97 7.01	97.30
Dec-89	98.90	447.10	13.18	17.00	175.82	7.01	99.10 100.60
Iviar-90	101.20	440.90	13.10	18.50	175.04	7.04	100.00
Son-90	102.90	401.70	13.30	16.20	174.14	7.10	103.00
Sep-90	103.70	408.80	13.43	10.42	103.44	7.20	104.40
Dec-90	106.20	481.70	12.55	15.50	165.21	7.07	105.50

Table 6: Perth (continued)

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-91	105.20	489.70	11.48	14.50	164.31	7.01	106.30
Jun-91	105.10	493.10	10.97	13.83	163.32	6.77	106.10
Sep-91	105.70	511.30	10.66	13.00	164.63	6.67	105.40
Dec-91	106.10	504.60	9.66	12.33	163.93	6.79	105.90
Mar-92	106.10	515.40	10.01	11.33	164.75	6.75	106.20
Jun-92	105.60	518.70	9.15	10.83	167.05	6.83	106.50
Sep-92	105.50	514.80	8.74	10.17	168.95	6.83	106.50
Dec-92	106.10	511.60	8.98	10.00	171.49	6.81	106.40
Mar-93	106.40	508.60	8.13	10.00	172.69	6.92	107.00
Jun-93	106.80	504.90	7.54	9.67	172.89	6.80	107.70
Sep-93	107.90	500.40	6.79	9.25	175.83	6.59	108.40
Dec-93	108.50	508.90	6.66	8.75	180.57	6.39	108.50
Mar-94	108.60	516.30	7.12	8.75	184.47	6.16	109.10
Jun-94	109.10	522.20	8.95	8.75	182.26	6.24	110.20
Sep-94	110.10	518.60	9.75	9.00	184.99	6.30	111.40
Dec-94	111.00	525.60	10.34	9.85	185.99	6.31	112.10
Mar-95	113.00	533.00	10.03	10.50	185.99	6.10	113.10
Jun-95	114.90	540.90	9.28	10.50	186.92	5.87	114.20
Sep-95	115.60	558.40	8.99	10.50	185.92	5.69	115.00
Dec-95	116.30	563.40	8.38	10.50	185.37	5.53	114.90
Mar-96	117.10	570.40	8.49	10.50	184.07	5.59	114.60
Jun-96	117.90	577.70	8.82	10.25	184.77	5.71	114.60
Sep-96	118.30	583.30	8.05	9.42	184.40	5.81	115.00
Dec-96	118.40	587.60	7.31	8.75	183.48	6.01	115.00
Mar-97	118.20	587.10	7.70	7.78	186.18	6.02	115.30
Jun-97	118.10	589.70	7.45	7.32	187.11	6.05	115.80
Sep-97	117.50	605.00	6.35	6.87	189.35	6.08	116.00
Dec-97	117.60	600.10	6.07	6.70	189.85	6.05	115.80
Mar-98	118.00	608.20	5.88	6.70	191.37	6.10	115.70
Jun-98	118.90	618.10	5.62	6.70	192.52	6.08	115.90
Sep-98	119.60	627.90	5.51	6.70	193.42	6.05	116.10
Dec-98	120.20	628.70	4.99	6.63	197.87	6.03	116.30
Mar-99	119.80	641.80	5.35	6.50	202.42	6.06	116.00
Jun-99	120.80	642.60	5.93	6.50	202.92	6.03	115.90
Sep-99	121.90	638.00	6.30	6.55	203.33	6.01	116.90
Dec-99	122.70	656.40	6.74	6.72	209.42	5.97	117.10
Mar-00	123.10	665.50	6.72	7.13	210.52	5.92	118.10
Jun-00	124.00	679.90	6.27	7.72	215.79	5.89	118.70
Sep-00	128.60	688.10	6.24	7.97	216.22	5.84	118.30
Dec-00	128.80	697.20	5.80	8.05	218.32	5.77	119.00
Mar-01	129.60	704.70	5.28	7.63	222.03	5.64	118.90
Jun-01	131.40	695.80	5.95	6.80	225.58	5.52	119.10
Sep-01	131.50	723.40	5.71	6.72	226.98	5.44	118.90
Dec-01	132.60	733.00	5.61	6.22	233.57	5.36	118.90

SOURCES

- 1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)
- 2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12E, Western Australia, seasonally adjusted
- 3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 capital market yields
- 4. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 indicator lending rates.
- 5. Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes
- 6. Real Estate Institute Of Australia, "Market Facts", 1982 2001
- 7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

Table 7: Darwin

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-80	0.00						44.00
Jun-80	0.00						45.80
Sep-80	51.00						47.70
Dec-80	52.20						48.50
Mar-81	53.20		13.10	11.50			49.60
Jun-81	54.20		13.10	11.50			50.70
Sep-81	55.30		14.63	11.83			51.90
Dec-81	58.60		15.00	12.50			52.80
Mar-82	59.50		15.08	12.67			54.70
Jun-82	60.50		16.00	13.50			56.50
Sep-82	62.50		16.03	13.50			57.80
Dec-82	64.30		14.38	13.50			58.50
Mar-83	65.60		13.67	12.83			59.60
Jun-83	66.80		13.97	12.50			60.80
Sep-83	67.70		14.55	12.33			61.60
Dec-83	68.60	372.40	13.37	12.00			62.70
Mar-84	68.90	381.00	13.87	11.50			64.40
Jun-84	68.90	393.30	13.93	11.50			66.00
Sep-84	69.80	402.10	13.02	11.50			67.10
Dec-84	70.50	403.30	13.28	11.50			68.00

Table 7: Darwin (continued)

Date	CPI ¹	AWOE ² :\$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-85	71.20	406.50	13.53	11.50			68.90
Jun-85	72.80	418.10	13.75	12.00			70.80
Sep-85	75.40	422.30	13.72	12.67			72.10
Dec-85	76.20	433.70	14.82	13.50			73.20
Mar-86	77.60	437.60	13.47	13.50			74.20
Jun-86	78.60	443.70	12.62	15.50	100.00		75.10
Sep-86	80.70	451.10	14.05	15.50	98.40		76.10
Dec-86	83.50	464.40	13.53	15.50	98.10		77.50
Mar-87	84.90	471.10	13.75	15.50	97.30		78.40
Jun-8/	86.30	472.00	12.95	15.50	95.60		79.60
Dec-87	99.20	404.70	12.00	14.17	97.00		92.40
Mar-88	90.20	403.00	12.20	13.67	100.60		84.60
Jun-88	91.80	487.10	11.92	13.50	91 10		87.40
Sep-88	92.40	494.20	11.90	14.50	94.30		89.40
Dec-88	93.30	504.00	12.40	14.67	97.70		91.80
Mar-89	94.70	508.10	13.53	15.50	101.70		93.90
Jun-89	96.30	514.40	13.60	16.33	101.50		96.20
Sep-89	97.60	516.50	13.32	17.00	99.60		97.70
Dec-89	99.40	516.80	13.18	17.00	97.30		99.30
Mar-90	100.60	532.60	13.18	17.00	99.90		100.50
Jun-90	102.40	548.60	13.56	16.50	103.30		102.40
Sep-90	103.50	552.10	13.43	16.42	107.70		103.30
Dec-90	106.40	567.40	12.55	15.50	108.20		104.20
Mar-91	106.10	572.90	11.48	14.50	110.10		105.30
Jun-91	106.60	580.70	10.97	13.83	111.00		105.60
Sep-91	106.90	590.10	0.66	13.00	112.00		105.20
Mar-92	108.20	605.60	10.01	11.33	116.30		104.70
Jun-92	108.40	617.00	9.15	10.83	120.20		105.10
Sep-92	108.90	619.70	8.74	10.00	126.50		105.00
Dec-92	109.20	629.80	8.98	10.00	129.30		105.90
Mar-93	109.80	630.90	8.13	10.00	133.60		107.00
Jun-93	110.00	632.60	7.54	9.67	144.90		109.20
Sep-93	110.60	636.20	6.79	9.25	146.90		110.70
Dec-93	111.70	633.20	6.66	8.75	154.50		111.70
Mar-94	111.40	627.60	7.12	8.75	156.70		112.40
Jun-94	112.40	640.20	8.95	8.75	164.50		113.30
Sep-94	113.00	635.50	9.75	9.00	173.00		114.10
Dec-94	113.70	649.00	10.34	9.85	177.10	7.04	115.20
Mar-95	115.30	658.00	10.03	10.50	179.10	7.64	119.90
Sep-95	119.00	665.60	9.20	10.50	183.00	7.50	116.00
Dec-95	119.20	664.50	8.38	10.50	187.90	7.66	115.20
Mar-96	119.80	659.80	8.49	10.50	190.00	7.63	115.30
Jun-96	120.80	673.20	8.82	10.25	190.00	7.77	115.50
Sep-96	121.60	679.30	8.05	9.42	191.80	7.79	115.60
Dec-96	121.70	686.50	7.31	8.75	195.10	7.84	115.80
Mar-97	121.60	702.50	7.70	7.78	198.40	7.77	116.10
Jun-97	121.50	701.90	7.45	7.32	202.20	7.69	117.00
Sep-97	121.00	711.20	6.35	6.87	199.50	7.55	117.30
Dec-97	120.80	713.10	6.07	6.70	202.40	7.44	117.90
Mar-98	121.50	740.30	5.88	6./U	199.70	7.38	118.70
Jun-98	121.80	742.80	5.62	6.7U	193.80	7.48	119.00
Sep-96	122.10	743.30	0.01	6.70	189.20	7.09	119.40
Mar-99	122.10	751.00	4.33	6.50	194.90	7.00	119.70
Jun-99	122.70	750.60	5.93	6.50	195.10	7,47	119.20
Sep-99	122.90	774.10	6.30	6.55	197.30	7.00	120.50
Dec-99	123.60	779.10	6.74	6.72	199.00	6.68	121.50
Mar-00	124.40	780.20	6.72	7.13	201.00	6.40	123.80
Jun-00	125.70	802.20	6.27	7.72	199.50	6.27	125.50
Sep-00	130.00	802.10	6.24	7.97	197.30	6.51	124.50
Dec-00	130.60	808.10	5.80	8.05	196.80	6.57	124.40
Mar-01	130.70	815.10	5.28	7.63	199.30	6.57	124.20
Jun-01	132.20	826.30	5.95	6.80	201.50	6.59	124.40
Sep-01	132.50	820.00	5.71	6.72	198.30	6.30	124.70
Dec-01	133.50	826.00	5.61	6.22	203.40	6.31	125.20

SOURCES

1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)

2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12G, Northern Territory, seasonally adjusted

3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 - capital market yields...

4. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 – indicator lending rates

5. Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes – percentage changes

6. Real Estate Institute Of Australia, "Market Facts", 1982 - 2001

7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes, for Darwin only, in the absence of city data, the weighted average for the six capital cities.

Table 8: Brisbane

CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
46.00						43.90
47.40						45.70
48.00						47.90
49.00						49.00
50.30		13.10	11.50			50.60
51.50		13.10	11.50			51.90
52.60		14.63	11.83			53.50
54.70		15.00	12.50			54.30
55.50		15.08	12.67			56.90
56.90		16.00	13.50			58.70
58.90		16.03	13.50			59.90
60.50		14.38	13.50			60.70
62.20		13.67	12.83		9.01	61.80
63.90		13.97	12.50		9.41	63.10
64.80		14.55	12.33		9.37	63.70
66.10	334.70	13.37	12.00		9.18	65.40
66.10	347.60	13.87	11.50		9.09	67.40
66.20	358.90	13.93	11.50		8.79	68.40
66.90	359.20	13.02	11.50		8.77	69.30
68.30	365.20	13.28	11.50		8.80	70.10
69.30	366.60	13.53	11.50		8.82	70.80
71.10	370.00	13.75	12.00		8.67	72.00
74.40	374.20	13.72	12.67		8.57	73.20
74.10	380.70	14.82	13.50		8.64	74.00
70.20	389.40	13.47	13.50	100.00	0.63	78.00
70.70	384.10	12.02	10.00	100.00	8.15	70.20
19.00	400.20	14.00	10.00	98.IU 07.00	9.4J 0.40	70.0U 77.70
01.00	412.10	13.33	15.50	31.3U 0.0 0.0	5.42 0.31	79.60
02.40	414.80	12.05	15.50	100.00	0.60	70.00
94.70	420.20	12.35	15.50	101.59	9.00	79.10
96.40	430.00	12.00	14.17	101.30	0.00 0.08	81.00
97.60	431.30	12.27	19.17	103.72	10.19	01.30
89.10	441.50	11.92	13.51	112.02	9.84	87.60
90.80	449.90	11.90	14.50	118.41	9.60	89.50
92.30	461.30	12.40	14.67	127 71	8.66	91.50
94.20	466.40	13.53	15.50	137.03	8.37	93.00
96.00	475.30	13.60	16.33	143.61	8.17	95.30
97.70	476.80	13.32	17.00	144 91	7.90	97.40
99.20	478.00	13.18	17.00	148.97	7 79	99.30
100.60	489.80	13.18	17.00	153.88	7.51	100.90
102.50	501.70	13.56	16.50	157.68	7.27	102.40
103.80	510.50	13.43	16.42	163.52	7.11	103.40
106.90	525.30	12.55	15.50	168.91	7.00	104.50
106.70	525.80	11.48	14.50	172.01	7.11	106.90
107.30	530.80	10.97	13.83	177.00	7.11	108.40
108.00	532.60	10.66	13.00	183.73	7.06	107.20
108.80	541.30	9.66	12.33	186.03	6.91	107.40
109.50	542.40	10.01	11.33	191.05	6.69	108.20
109.40	539.30	9.15	10.83	193.15	6.62	108.80
110.10	545.70	8.74	10.17	195.25	6.51	109.30
110.70	549.10	8.98	10.00	193.88	6.46	109.80
111.60	559.70	8.13	10.00	196.60	6.41	110.50
112.30	566.80	7.54	9.67	197.20	6.37	111.20
112.70	573.80	6.79	9.25	197.00	6.41	112.70
112.80	576.70	6.66	8.75	199.17	6.39	113.40
113.60	580.60	7.12	8.75	200.47	6.49	113.70
114.40	581.70	8.95	8.75	200.47	6.45	114.20
114.90	585.00	9.75	9.00	200.47	6.49	114.60
116.00	589.40	10.34	9.85	200.97	6.49	116.00
117.80	594.90	10.03	10.50	201.17	6.41	116.20
118.80	608.00	9.28	10.50	197.55	6.42	116.60
120.10	609.30	8.99	10.50	197.05	6.43	116.30
121.10	617.00	8.38	10.50	197.05	6.61	115.50
121.60	613.60	8.49	10.50	195.87	6.76	114.40
122.00	620.60	8.82	10.25	195.57	0./1	114.00
122.20	644.00	8.05	9.42	197.10	0./1	114.40
122.60	665.00	7.31	0.70 7.70	195.18	0.01	114.80
122.00	657.70	7.70	7.10	190.06	0.48 R.40	110.40
121.80	663.70	7.40 8.35	1.32 6.97	199.30	U.40 R 91	116.00
121.20	676.40	6.35	6.70	100.00	0.31 8.20	116.00
121.20	684 an	5.88	6.70	100.10	0.20 R.47	117.00
121.10	691.90	5.60	6.70	201.73	6.73	117.00
122.40	697.90	5.52	6.10	201.13	6.13	118.40
123.60	695.50	4 99	6.63	198.67	5.84	118.60
.20.00	000.00	4.00	0.00	100.01	0.01	110.00

Table 8: Brisbane (continued)

Date	CPI ¹	AWOE ² : \$	10 Year Bonds ³ %	Stan. Var. Rate Home Loans ⁴ %	Estab Dwelling Price Index ⁵	Median Rental Yields ⁶	Housing Cost Index ⁷
Mar-99	122.70	699.60	5.35	6.50	200.06	5.57	118.40
Jun-99	123.60	703.60	5.93	6.50	200.66	5.60	117.50
Sep-99	125.10	702.80	6.30	6.55	200.66	5.70	118.30
Dec-99	125.70	708.90	6.74	6.72	200.86	5.92	119.90
Mar-00	126.80	718.90	6.72	7.13	200.76	5.81	122.10
Jun-00	127.60	723.70	6.27	7.72	204.98	5.57	122.90
Sep-00	132.30	753.50	6.24	7.97	208.05	5.40	121.20
Dec-00	132.50	751.10	5.80	8.05	209.95	5.16	120.60
Mar-01	134.10	760.10	5.28	7.63	210.58	5.16	120.40
Jun-01	135.10	772.30	5.95	6.80	213.74	5.30	120.20
Sep-01	135.30	777.90	5.71	6.72	215.44	5.40	120.20
Dec-01	136.60	792.70	5.61	6.22	228.37	5.50	120.70

SOURCES

- 1. Australian Bureau Of Statistics: 6401.0 Consumer Price Index : Table 1b, All Groups Index Numbers (quarter) (a)
- 2. Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12C, Queensland, seasonally adjusted
- 3. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 capital market yields
- 4. Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f05 indicator lending rates
- 5. Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes
- 6. Real Estate Institute Of Australia, "Market Facts", 1982 2001
- 7. Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index
1981		3.78		1.20
1982		4.08		1.55
1983		2.68		-0.84
1984		9.04		3.89
1985	-1.27	6.19		1.27
1986	-1.19	4.41		-2.36
1987	-2.78	4.67	-6.80	-3.28
1988	0.08	5.07	-0.96	1.42
1989	-0.77	5.41	0.47	0.49
1990	0.56	5.88	-0.45	-0.32
1991	2.32	6.29	-1.05	-1.55
1992	2.99	7.01	-1.64	-3.65
1993	0.13	4.96	-0.13	5.56
1994	-1.16	6.79	-2.15	3.66
1995	-1.42	4.85	-4.44	-3.79
1996	0.63	5.81	-4.36	-1.82
1997	3.93	7.22	1.78	2.69
1998	4.41	4.68	2.47	1.22
1999	0.37	4.72	2.37	-0.41
2000	1.03	1.75	2.05	-1.40
2001	1.69	1.33	5.22	-3.94

 Table 9: Adelaide: Real Annual Percentage Changes In Systematic Risk Variables:

 1982-2001

Source: Derived from Table 1, Attachment 5.

 Table 10: Melbourne: Real Annual Percentage Changes In Systematic Risk Variables:

 1982-2001

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index
1981		3.80		0.30
1982		4.07		0.07
1983		3.05		-1.22
1984		8.66		5.83
1985	-1.21	6.69		0.31
1986	-1.88	3.77		-2.55
1987	-1.08	4.26	-2.99	-2.22
1988	0.19	4.98	13.35	2.96
1989	-0.92	5.34	9.30	0.68
1990	-0.64	5.20	-9.74	-2.68
1991	1.45	6.69	-3.11	-2.16
1992	2.05	8.28	-3.91	-1.14
1993	0.14	5.26	0.06	3.69
1994	1.25	7.19	1.33	2.74
1995	0.25	4.78	-3.59	-2.24
1996	1.50	5.96	0.21	-2.97
1997	4.42	6.38	8.18	0.23
1998	3.49	5.10	10.44	1.50
1999	0.30	4.43	9.15	-1.03
2000	-0.43	1.53	1.73	-0.63
2001	0.63	1.23	13.02	-4.00

Source: Derived from Table 2, Attachment 5.

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index
1981		3.98		-0.27
1982		3.51	-10.28	-1.81
1983		3.60	-9.03	-3.50
1984		9.98	-3.12	3.82
1985	-1.35	6.85	-6.24	1.75
1986	-1.67	3.84	-8.45	-2.76
1987	-3.80	4.26	-1.52	-1.98
1988	-0.41	3.73	23.33	2.60
1989	1.98	5.41	16.91	2.93
1990	-0.66	5.43	-7.79	-1.10
1991	1.83	7.49	-0.45	-0.43
1992	3.77	8.30	1.40	-0.72
1993	-1.22	5.72	1.12	2.07
1994	3.01	7.12	2.06	1.82
1995	1.83	3.82	-2.37	-2.56
1996	0.75	4.79	-2.28	-3.16
1997	2.69	6.65	3.27	1.30
1998	2.36	4.26	8.09	1.69
1999	3.11	4.36	5.35	-0.03
2000	1.15	1.70	3.20	0.99
2001	0.58	0.84	3.14	-4.00

 Table 11: Sydney: Real Annual Percentage Changes In Systematic Risk Variables:

 1982-2001

Source: Derived from Table 3, Attachment 5.

 Table 12: Canberra: Real Annual Percentage Changes In Systematic Risk Variables:

 1982-2001

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index		
1981		3.87		-0.37		
1982		3.37		-1.94		
1983		3.32		-3.77		
1984		8.74		2.65		
1985	-1.99	6.35		1.28		
1986	-0.92	4.27		-2.35		
1987	-2.48	5.23	-7.93	-1.07		
1988	-0.22	4.84	6.57	3.70		
1989	-0.41	6.15	4.56	3.66		
1990	0.05	5.79	-1.67	-0.76		
1991	2.00	7.19	9.01	-0.70		
1992	2.72	7.28	10.24	-1.66		
1993	1.53	5.10	1.78	1.47		
1994	1.48	7.32	-2.99	2.02		
1995	-0.74	3.82	-7.76	-2.56		
1996	2.07	5.48	-3.86	-2.53		
1997	3.82	7.69	-0.30	2.29		
1998	4.85	4.75	0.31	2.17		
1999	0.27	5.17	2.24	0.74		
2000	1.86	1.38	4.15	1.15 0.67		
2001	-1.19	1.42	7.22	-3.44		

Source: Derived from Table 4, Attachment 5.

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index		
1981		4.11		0.13		
1982		4.60		0.91		
1983		3.79		-2.50		
1984		8.95		6.07		
1985	-1.77	6.13		2.47		
1986	-1.68	4.05		-2.46		
1987	-3.94	3.68	-6.40	-4.35		
1988	0.67	5.38	0.07	1.01		
1989	-0.04	6.12	2.28	0.81		
1990	0.48	6.51	-0.85	-0.40		
1991	0.27	7.11	4.03	0.56		
1992	2.15	7.97	1.58	1.15		
1993	0.33	4.58	2.02	-0.77		
1994	0.63	6.46	2.70	0.88		
1995	-1.96	4.76	-1.63	0.13		
1996	1.70	5.41	-2.44	-2.01		
1997	5.52	6.47	-4.25	-0.50		
1998	2.39	4.63	-1.33	0.60		
1999	1.16	5.46	-0.28	-0.45		
2000	-0.29	1.64	1.35	-1.86		
2001	-0.13	2.04	-1.07	-2.09		

Table 13: Hobart: Real Annual Percentage Changes In Systematic Risk Variables: 1982 2001

Source: Derived from Table 5, Attachment 5.

 Table 14: Perth: Real Annual Percentage Changes In Systematic Risk Variables: 1982-2001

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index		
1981		3.96		0.24		
1982		4.05		0.81		
1983		4.08		-2.74		
1984		9.47		3.26		
1985	1.63	6.82		-0.69		
1986	-2.54	4.15		-1.69		
1987	-2.82	3.83	-4.04	-1.85		
1988	-1.18	4.69	13.14	1.63		
1989	0.50	5.48	21.85	4.74		
1990	-1.45	4.74	-6.69	-0.41		
1991	5.34	8.54	-5.86	0.51		
1992	2.83	8.91	2.16	0.16		
1993	-3.27	5.71	2.89	-0.08		
1994	0.81	6.76	2.91	0.44		
1995	0.61	4.18	-3.72	-1.46		
1996	2.97	5.43	-3.51	-2.10		
1997	2.78	6.96	2.21	0.87		
1998	3.08	4.32	1.87	-0.88		
1999	2.06	4.22	3.69	-1.35		
2000	1.85	2.20	1.22	-2.12		
2001	0.49	1.46	1.32	-3.61		

Source: Derived from Table 6, Attachment 5.

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index		
1981						
1982		3.43		-0.52		
1983		4.56		-1.23		
1984		9.67		4.82		
1985	0.11	7.22		1.00		
1986	-1.36	4.64		-1.93		
1987	-2.05	4.16	-9.30	-2.46		
1988	-2.17	6.06	-6.48	4.04		
1989	-1.39	7.54	-0.97	3.96		
1990	0.59	6.36	-1.48	-0.36		
1991	2.55	6.81	2.94	-1.04		
1992	4.01	7.46	8.37	-1.52		
1993	0.79	5.51	15.82	2.41		
1994	-1.11	7.01	13.64	1.82		
1995	-0.55	4.80	5.14	-2.03		
1996	-1.01	4.90	1.31	-3.46		
1997	4.60	6.67	4.43	1.10		
1998	4.60	4.80	-3.72	1.15		
1999	1.93	5.39	0.49	0.16		
2000	0.53	2.23	-2.76	-0.28		
2001	-0.59	1.97	-2.50	-3.41		

Table 15: Darwin: Real Annual Percentage Changes In Systematic Risk Variables: 1982-2001

Source: Derived from Table 7, Attachment 5.

 Table 16: Brisbane: Real Annual Percentage Changes In Systematic Risk Variables:

 1982-2001

Date	AWOE/INCOME	10 Year Bonds	Estab. Dwelling Price Index	Housing Cost Index		
1981		3.78		2.76		
1982		4.08		1.33		
1983		2.68		-3.03		
1984		9.04		4.08		
1985	-2.86	6.19		-1.81		
1986	-1.21	4.41		-3.08		
1987	-1.79	4.67	-5.32	-3.26		
1988	-1.25	5.07	8.66	3.68		
1989	-1.56	5.41	14.02	1.27		
1990	-0.01	5.88	4.85	-0.05		
1991	0.95	6.29	7.19	0.40		
1992	0.09	7.01	5.49	-0.61		
1993	2.36	4.96	-0.05	0.46		
1994	0.51	6.79	-0.53	0.27		
1995	-0.15	4.85	-5.10	-2.67		
1996	1.14	5.81	-3.16	-3.65		
1997	5.97	7.22	1.00	2.02		
1998	3.60	4.68	0.49	0.61		
1999	0.32	4.72	-1.04	-0.82		
2000	0.25	1.75	-1.68	-1.67		
2001	1.01	1.33	1.08	-5.11		

Source: Derived from Table 8, Attachment 5.

ATTACHMENT 6: FREQUENCY DISTRIBUTIONS OF SYSTEMATIC RISK DATA

GRAPH 1



ADELAIDE: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001

Quarterly Percentage Change In CPI

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index : Table 1b, All Groups Index Numbers (quarter) (a)

GRAPH 2



MELBOURNE: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001

Quarterly Percentage Change In CPI

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index : Table 1b, All Groups Index Numbers (quarter) (a)



SYDNEY: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001

Quarterly Percentage Change In CPI

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index : Table 1b, All Groups Index Numbers (quarter) (a)

GRAPH 4



ACT: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001

Quarterly Percentage Change In CPI

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)



HOBART: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001

Quarterly Percentage Change In CPI

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)



GRAPH 6

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index : Table 1b, All Groups Index Numbers (quarter) (a)



DARWIN: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)

GRAPH 8

BRISBANE: DISTRIBUTION OF QUARTERLY CHANGE IN CPI's: 1982 - 2001



Quarterly Percentage Change In CPI

Source: Australian Bureau Of Statistics: 6401.0 Consumer Price Index: Table 1b, All Groups Index Numbers (quarter) (a)



ADELAIDE: DISTRIBUTION OF QUARTERLY CHANGE IN AVERAGE WEEKY ORDINARY TIME EARNINGS: 1984 - 2001

Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12D, South Australia, Seasonally Adjusted

GRAPH 10



MELBOURNE: DISTRIBUTION OF QUARTERLY CHANGE IN AVERAGE WEEKY ORDINARY TIME EARNINGS: 1984 - 2001

Quarterly Percentage Change In AWOE

Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12B, Victoria, Seasonally Adjusted



SYDNEY: DISTRIBUTION OF QUARTERLY CHANGE IN AVERAGE WEEKY ORDINARY TIME EARNINGS: 1984 - 2001

Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12A, New South Wales, Seasonally Adjusted

GRAPH 12

ACT: DISTRIBUTION OF QUARTERLY CHANGE IN AVERAGE WEEKY ORDINARY TIME EARNINGS: 1984 - 2001



Quarterly Percentage Change In AWOE

Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12H, Australian Capital Territory, Seasonally Adjusted





Quarterly Percentage Change In AWOE

Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12F, Tasmania, Seasonally Adjusted

GRAPH 14

PERTH: DISTRIBUTION OF QUARTERLY CHANGE IN AVERAGE WEEKY ORDINARY TIME EARNINGS: 1984 - 2001



Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12E, Western Australia, Seasonally Adjusted



DARWIN: DISTRIBUTION OF QUARTERLY CHANGE IN AVERAGE WEEKY ORDINARY TIME EARNINGS: 1984 - 2001

Quarterly Percentage Change In AWOE

Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12G, Northern Territory, Seasonally Adjusted

GRAPH 16

BRISBANE: DISTRIBUTION OF QUARTERLY CHANGE IN AVERAGE WEEKY ORD<u>INARY</u> TIME EARNINGS: 1984 - 2001



Quarterly Percentage Change In AWOE

Source: Australian Bureau Of Statistics: 6302.0 Average Weekly Earnings, Table 12C, Queensland, Seasonally Adjusted



DISTRIBUTION OF QUARTERLY CHANGE IN 10 YEAR

Quarterly Percentage Change In 10 Year Bond Rate

Source: Reserve Bank Of Australia Bulletin (F) F GROUP Financial Markets Monthly Table f02 - capital market vields

1 NOTE: The10 Year Commonwealth Bond Rate is a national series so the data equally applies in all capital cities and is not, therefore, reproduced more than once.

GRAPH 18

ADELAIDE: DISTRIBUTION OF QUARTERLY CHANGE IN ESTABLISHED DWELLING PRICE INDEX: 1981 - 2001



Quarterly Percentage Change In Established Dwelling Price Index





MELBOURNE: DISTRIBUTION OF QUARTERLY CHANGE IN ESTABLISHED DWELLING PRICE INDEX: 1981 - 2001

Quarterly Percentage Change In Established Dwelling Price Index

Source: Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes

GRAPH 20





Quarterly Percentage Change In Established Dwelling Price Index

Source: Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes



ACT: DISTRIBUTION OF QUARTERLY CHANGE IN ESTABLISHED DWELLING PRICE INDEX: 1981 - 2001

Quarterly Percentage Change In Established Dwelling Price Index

Source: Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes

GRAPH 22

HOBART: DISTRIBUTION OF QUARTERLY CHANGE IN ESTABLISHED DWELLING PRICE INDEX: 1983 - 2001



Quarterly Percentage Change In Established Dwelling Price Index

Source: Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes



PERTH: DISTRIBUTION OF QUARTERLY CHANGE IN ESTABLISHED DWELLING PRICE INDEX: 1981 - 2001

Quarterly Percentage Change In Established Dwelling Price Index

Source: Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes

GRAPH 24





Quarterly Percentage Change In Established Dwelling Price Index

Source: Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes –percentage changes



BRISBANE: DISTRIBUTION OF QUARTERLY CHANGE IN ESTABLISHED DWELLING PRICE INDEX: 1981 - 2001

Source: Australian Bureau Of Statistics: 6416.0 House Price Indexes: Eight Capital Cities: Table 2B, Established House Price Indexes -percentage changes

GRAPH 26



ADELAIDE: DISTRIBUTION OF QUARTERLY CHANGE IN MEDIAN

Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001

GRAPH 27







Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001

Quarterly Percentage Change In Established Dwelling Price Index



SYDNEY: DISTRIBUTION OF QUARTERLY CHANGE IN MEDIAN

Quarterly Percentage Change In Median Rental Yields

Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001

GRAPH 29





Quarterly Percentage Change In Median Rental Yields

Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001 **GRAPH 30**

> HOBART: DISTRIBUTION OF QUARTERLY CHANGE IN MEDIAN **RENTAL YIELDS: 1988 - 2001**



Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001



PERTH: DISTRIBUTION OF QUARTERLY CHANGE IN MEDIAN RENTAL

Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001

GRAPH 32





Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001



BRISBANE: DISTRIBUTION OF QUARTERLY CHANGE IN MEDIAN **RENTAL YIELDS: 1982 - 2001**

Source: Real Estate Institute Of Australia, "Market Facts", 1982 - 2001

GRAPH 34



ADELAIDE: DISTRIBUTION OF QUARTERLY CHANGE IN HOUSING

Quarterly Percentage Change In Housing Cost Index

Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.



MELBOURNE: DISTRIBUTION OF QUARTERLY CHANGE IN HOUSING COST INDEX: 1982 - 2001

Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

GRAPH 36

SYDNEY: DISTRIBUTION OF QUARTERLY CHANGE IN HOUSING COST INDEX: 1980 - 2001



Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

GRAPH 37





Quarterly Percentage Change In Housing Cost Index

Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.



HOBART: DISTRIBUTION OF QUARTERLY CHANGE IN HOUSING COST INDEX: 1982 - 2001

Quarterly Percentage Change In Housing Cost Index

Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

GRAPH 39





Quarterly Percentage Change In Housing Cost Index

Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.



DARWIN: DISTRIBUTION OF QUARTERLY CHANGE IN HOUSING COST INDEX: 1982 - 2001

Quarterly Percentage Change In Housing Cost Index

Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

GRAPH 41

BRISBANE: DISTRIBUTION OF QUARTERLY CHANGE IN HOUSING COST INDEX: 1982 - 2001



Quarterly Percentage Change In Housing Cost Index

Source: Australian Bureau Of Statistics: 6427.0 Producer Price Indexes, Australia, Table 18 Materials Used In House Building (a) percentage changes.

ATTACHMENT 7: SIMULATION RESULTS

Table 1: Adelaide: Simulation Results: All Cases: Present Value Subsidy Per Tenant Year

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases	Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
1	5,337	203	5,475	3,474	4,475	3,793	51	40	1,397	1,150	776	963	865
2	1,427	693	961	1,860	1,410	1,270	52	3,084	723	2,594	2,627	2,611	2,328
3	4,209	406	3,182	3,524	3,353	2,935	53	5,031	760	4,447	3,846	4,147	3,646
4	1,907	675	1,446	2,403	1,925	1,671	54	196	346	319	1,194	756	562
5	-4	841	497	389	443	433	55	-159	983	746	625	685	576
6	3,677	202	2,845	3,481	3,163	2,673	56	996	302	653	1,777	1,215	989
7	2,238	771	2,519	2,043	2,281	1,971	57	809	407	289	2,052	1,170	945
8	4,550	531	3,453	3,551	3,502	3,118	58	-643	473	404	817	610	332
9	3,200	768	2,861	2,770	2,816	2,483	59	-967	1,113	-727	1,529	401	270
10	5,603	661	4,544	3,871	4,208	3,777	60	1,065	1,512	2,720	653	1,687	1,527
11	3,255	715	2,991	3,098	3,044	2,621	61	4,439	1,105	3,703	3,524	3,614	3,277
12	3,499	637	2,572	3,168	2,870	2,549	62	1,131	953	1,157	1,500	1,328	1,214
13	136	1,250	952	197	575	622	63	1,727	859	1,757	1,552	1,655	1,510
14	1,824	934	2,240	1,732	1,986	1,743	64	2,280	765	1,980	2,269	2,125	1,884
15	3,382	697	2,705	3,014	2,859	2,531	65	4,986	193	4,589	3,699	4,144	3,522
16	1,953	717	1,568	2,048	1,808	1,619	66	-1,471	735	177	-569	-196	-265
17	821	1,105	1,136	1,125	1,130	1,063	67	12	921	-251	1,609	679	594
18	3,724	737	2,913	3,217	3,065	2,731	68	5,069	542	4,586	4,076	4,331	3,721
19	5,329	507	4,899	3,952	4,426	3,823	69	3,058	539	2,735	3,046	2,891	2,454
20	5,357	900	4,887	3,659	4,273	3,815	70	1,146	934	953	1,830	1,391	1,251
21	2,763	1,024	2,392	2,410	2,401	2,198	71	835	1,009	819	1,338	1,078	1,016
22	1,061	642	641	1,874	1,257	1,095	72	-328	377	96	1,268	682	419
23	3,040	786	3,299	2,444	2,871	2,488	73	2,232	432	1,415	2,551	1,983	1,722
24	1,303	260	1,009	1,734	1,371	1,135	14	118	511	198	1,428	813	614
25	2,910	454	2,269	2,912	2,590	2,227	75	-1,629	814	-281	99	-105	-220
26	2,915	1,107	2,008	2,374	2,521	2,329	76	0,007	1,021	5,086	3,808	4,447	3,980
21	3,003	1 459	2,422	2,700	2,009	2,320	70	1,030	204	1,344	2,102	1,740	2,072
20	4,935	608	2,174	2,100	2,107	2,070	79	1 739	230	1,997	2,840	1 695	1.536
30	6.032	653	4,331	4 029	4 502	4 038	80	-1 306	1.882	161	521	341	320
31	279	1 141	1,305	1,020	1,002	980	81	4 833	34	3 584	4 128	3,856	3 287
32	2 156	1 134	2 183	1,859	2 021	1.871	82	4 818	1 109	4 744	3 276	4 010	3 591
33	2.865	872	2.663	2.129	2.396	2.185	83	-562	611	-249	925	338	213
34	5.392	871	5.070	3.635	4.353	3.864	84	3.974	667	3.566	3.190	3.378	2.955
35	187	524	764	975	870	664	85	4,985	238	4,406	3,568	3,987	3,437
36	-131	720	236	697	467	398	86	-1,172	1,289	-352	465	57	57
37	1,746	768	1,488	2,087	1,788	1,575	87	4,691	847	4,646	3,496	4,071	3,550
38	2,054	765	1,945	1,951	1,948	1,733	88	6,624	553	5,971	4,204	5,088	4,488
39	3,888	1,216	3,644	2,810	3,227	2,957	89	-1,081	1,137	-192	169	-11	5
40	3,163	765	3,096	2,330	2,713	2,414	90	4,902	982	4,252	3,473	3,862	3,494
41	2,247	967	2,801	1,902	2,351	2,053	91	4,381	962	4,212	3,445	3,829	3,366
42	3,026	1,476	3,030	2,883	2,957	2,675	92	1,816	608	1,443	1,932	1,688	1,498
43	1,439	973	1,650	1,547	1,598	1,441	93	-321	668	367	593	480	357
44	-1,247	1,156	-730	1,057	164	80	94	-729	1,131	-130	1,771	820	573
45	5,668	531	4,606	4,043	4,324	3,834	95	-1,609	352	-1,321	1,590	134	-171
46	1,315	500	1,388	1,592	1,490	1,257	96	4,255	561	3,375	3,592	3,484	3,053
47	2,873	1,332	2,603	2,376	2,490	2,335	97	-33	747	-143	1,703	780	611
48	4,226	490	4,103	3,390	3,746	3,191	98	2,389	841	2,122	2,341	2,231	1,985
49	4,315	621	4,374	3,186	3,780	3,255	99	-1,816	1,079	-162	375	106	-84
50	1,864	1,179	1,836	1,726	1,781	1,677	100	4,485	462	4,236	3,558	3,897	3,328
Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases	Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
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1	6,186	1,993	8,141	3,815	5,978	5,222	51	622	1,912	2,359	1,510	1,934	1,667
2	-1,845	1,759	1,691	-1,355	168	84	52	1,849	2,613	4,331	1,255	2,793	2,568
3	2,531	2,715	5,327	1,674	3,501	3,150	53	2,622	2,537	6,289	1,527	3,908	3,377
4	-995	3,049	2,166	-192	987	1,003	54	-3,895	4,383	2,174	-2,694	-260	-59
5	-5,371	4,127	1,748	-4,718	-1,485	-1,140	55	-2,517	3,470	1,490	-1,446	22	204
6	2,539	2,242	5,243	1,986	3,614	3,125	56	-2,805	3,256	1,516	-2,159	-322	-103
7	-1,268	4,154	4,080	-1,704	1,188	1,290	57	-2,884	3,364	734	-1,063	-164	-3
8	3,398	2,548	6,024	2,282	4,153	3,681	58	-1,482	692	681	-271	253	-26
9	-954	4,057	4,666	-1,786	1,440	1,484	59	-4,453	4,119	-114	-1,246	-680	-475
10	4,475	3,773	7,295	2,868	5,081	4,699	60	1,802	1,806	3,957	1,295	2,626	2,297
11	2,529	1,627	4,760	2,119	3,440	2,895	61	3,204	2,817	5,740	2,211	3,976	3,590
12	2,017	2,434	4,607	1,384	2,995	2,688	62	-3,229	3,270	2,135	-2,575	-220	-124
13	-2,899	4,422	2,429	-2,848	-210	179	63	-1,992	3,598	3,697	-2,150	773	785
14	-1,064	2,481	3,112	-1,212	950	853	64	1,495	1,569	3,288	1,375	2,331	2,012
15	2,563	2,037	4,517	2,117	3,317	2,910	65	2,659	3,840	7,624	1,085	4,355	3,913
16	-900	2,633	2,635	-878	879	874	66	-4,222	3,840	1,097	-3,090	-996	-674
17	655	3,073	2,906	879	1,893	1,881	67	-4,067	2,991	172	-1,728	-778	-682
18	2,416	2,774	4,800	1,669	3,235	2,979	68	3,713	3,111	6,654	2,737	4,696	4,182
19	5,549	2,536	7,273	3,932	5,602	4,979	69	2,293	2,809	4,103	2,096	3,100	2,880
20	2,556	3,722	7,367	1,066	4,216	3,785	70	-805	3,015	2,553	-101	1,226	1,178
21	624	3,308	3,776	260	2,018	1,997	71	-4,319	3,522	1,590	-3,295	-852	-671
22	-1,729	2,267	2,241	-646	797	586	72	-4,618	2,720	463	-2,727	-1,132	-1,059
23	807	3,167	4,351	95	2,223	2,129	73	-1,428	2,689	3,000	-1,049	976	838
24	-1,797	4,281	2,786	-1,425	681	905	74	-3,335	3,014	757	-1,447	-345	-271
25	-37	3,387	3,880	-238	1,821	1,762	75	-3,377	3,847	978	-1,368	-195	-23
26	751	3,238	4,608	162	2,385	2,229	76	5,125	2,518	6,972	3,331	5,152	4,620
27	163	2,791	4,336	-335	2,000	1,791	77	-3,422	3,649	1,696	-2,377	-340	-159
28	-1,556	4,040	4,323	-1,855	1,234	1,237	78	2,436	2,631	4,077	2,260	3,169	2,915
29	4,496	1,647	6,057	3,245	4,651	4,019	79	42	2,937	3,588	199	1,894	1,732
30	4,838	2,648	7,345	3,046	5,196	4,615	80	-4,515	3,618	-36	-1,989	-1,012	-787
31	-962	3,211	1,997	-48	974	1,035	81	4,228	1,395	5,469	3,344	4,406	3,768
32	-559	4,578	4,550	-991	1,780	1,872	82	4,409	3,535	8,057	2,706	5,382	4,818
33	1,744	3,463	5,356	815	3,085	2,893	83	-4,197	3,346	749	-2,215	-733	-610
34	2,395	4,221	7,512	960	4,236	3,865	84	2,222	2,985	5,975	1,301	3,638	3,224
35	-2,413	2,202	1,097	-1,418	-161	-139	85	4,453	1,763	6,816	2,834	4,825	4,138
36	-1,106	2,272	2,193	-33	1,080	881	86	-2,650	1,931	697	-544	76	-98
37	462	3,025	2,752	860	1,806	1,781	87	3,540	3,739	6,730	2,215	4,473	4,139
38	588	2,601	3,538	327	1,932	1,797	88	3,373	4,505	8,376	1,479	4,928	4,532
39	1,705	3,117	6,379	728	3,554	3,097	89	-2,813	3,193	769	-1,104	-167	-24
40	1,627	3,165	5,367	601	2,984	2,749	90	3,237	3,798	6,510	1,944	4,227	3,943
41	-1,262	4,235	3,883	-1,577	1,153	1,286	91	4,277	1,517	6,167	3,256	4,711	3,986
42	1,713	2,774	4,490	1,354	2,922	2,651	92	75	2,672	3,107	380	1,743	1,595
43	-780	2,288	2,586	-685	951	872	93	-2,027	3,617	1,866	-861	502	619
44	-3,450	3,250	-132	-406	-269	-201	94	-3,892	2,562	-192	-414	-303	-448
45	-2	4,627	7,334	-1,185	3,074	2,770	95	-7,690	5,042	-1,289	-3,282	-2,286	-1,901
46	-2,430	2,923	2,191	-2,435	-122	25	96	4,244	1,599	5,368	3,435	4,402	3,810
47	2,844	2,286	4,939	2,213	3,576	3,172	97	-4,081	2,899	264	-1,758	-747	-685
48	3,224	3,332	5,997	2,158	4,078	3,758	98	-58	4,065	3,397	-89	1,654	1,794
49	3,247	3,883	6,261	1,940	4,101	3,886	99	-4,511	3,893	-180	-1,587	-883	-654
50	1,412	2,270	3,215	1,280	2,248	2,085	100	-2,321	3,260	895	-71	412	435

Table 2: Melbourne: Simulation Results: All Cases: Present Value Subsidy Per Tenant Year

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases	Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
1	3,778	4,793	9,021	1,997	5,509	5,019	51	-2,372	4,187	1,948	-1,235	356	577
2	-3,841	5,314	2,151	-3,196	-522	-19	52	1,335	4,517	5,420	650	3,035	2,992
3	2,334	3,945	5,848	1,496	3,672	3,459	53	3,283	3,978	7,245	2,081	4,663	4,250
4	759	3,620	3,406	1,531	2,469	2,357	54	-1,095	3,888	2,052	-103	974	1,143
5	-2,522	4,240	2,487	-1,932	277	510	55	-3,819	5,085	1,517	-2,682	-583	-96
6	3,261	3,288	5,305	2,668	3,986	3,701	56	-2,926	4,789	1,548	-2,220	-336	171
7	-371	4,627	3,743	-887	1,428	1,708	57	-3,169	3,982	965	-1,173	-104	100
8	2,786	4,411	6,659	1,646	4,153	3,931	58	-2,954	3,669	1,153	-1,134	9	149
9	3,254	4,164	5,630	2,497	4,064	3,922	59	-5,051	3,723	-453	-1,621	-1,037	-888
10	5,558	3,383	8,041	3,807	5,924	5,343	60	-800	4,299	3,987	-1,284	1,352	1,511
11	2,127	4,146	4,954	1,627	3,291	3,229	61	3,577	3,611	6,802	2,463	4,632	4,217
12	1,334	4,420	4,825	696	2,760	2,807	62	-1,683	4,474	2,613	-1,013	800	1,038
13	-1,915	4,182	2,976	-1,901	538	776	63	-960	4,566	3,764	-1,119	1,323	1,515
14	-208	4,310	4,209	-358	1,926	1,976	64	147	3,954	3,678	145	1,911	1,967
15	977	4,044	4,659	557	2,608	2,569	65	3,996	4,320	7,491	2,224	4,857	4,578
16	1,307	3,440	3,840	1,291	2,565	2,489	66	-4,772	5,348	2,158	-3,597	-719	-316
17	-1,041	3,085	2,903	-605	1,149	1,098	67	-3,372	3,986	430	-821	-195	6
18	2,185	4,791	5,751	1,256	3,503	3,497	68	4,545	3,994	7,566	3,401	5,483	4,998
19	5,423	3,979	8,062	3,787	5,924	5,435	69	943	3,160	4,085	822	2,454	2,293
20	5,379	3,426	8,618	3,619	6,119	5,432	70	-320	3,993	2,448	633	1,541	1,659
21	-623	4,239	3,919	-932	1,494	1,619	71	-3,611	4,840	1,960	-2,587	-314	58
22	-3,206	4,361	1,602	-1,968	-183	121	72	-6,167	4,641	259	-4,163	-1,952	-1,476
23	1,154	4,285	5,558	359	2,959	2,863	73	-1,755	4,418	2,810	1,244	783	1,002
24	-1,353	4,306	3,697	-993	1,352	1,402	74	-3,925	3,561	1,374	-1,872	-249	-222
25	-449	3,804	3,989	-619	1,685	1,682	75	-3,289	3,898	768	-1,102	-167	22
26	3,297	3,692	6,058	2,588	4,323	3,991	76	2,709	4,696	7,713	1,333	4,523	4,195
27	-1,535	4,813	4,709	-2,079	1,315	1,445	77	-2,463	4,901	2,075	-1,386	344	694
28	769	3,578	4,141	452	2,297	2,247	78	513	3,752	3,939	383	2,161	2,149
29	753	4,978	6,721	190	3,455	3,220	79	-46	4,142	4,677	-398	2,140	2,103
30	5,169	4,367	9,189	3,331	6,260	5,663	80	-3,369	4,339	873	-866	4	196
31	-719	3,951	2,473	-348	1,062	1,284	81	2,522	3,334	6,300	1,676	3,988	3,564
32	644	4,530	4,865	162	2,513	2,543	82	3,764	4,002	7,846	2,186	5,016	4,563
33	1,985	4,096	5,423	966	3,195	3,133	83	-3,315	4,156	1,068	-1,256	-94	112
34	3,189	4,403	8,158	1,757	4,958	4,493	84	2,869	3,858	6,472	1,874	4,173	3,849
35	-3,794	4,398	1,381	-2,717	-668	-280	85	3,640	4,484	8,222	2,062	5,142	4,710
36	-2,167	3,979	2,629	-817	906	906	86	-2,663	3,206	1,047	-402	323	302
37	-2,101	4,187	2,457	-1,655	401	658	87	1,863	5,123	6,897	488	3,693	3,613
38	342	3,283	3,911	88	2,000	1,925	88	5,097	4,993	8,600	2,975	5,787	5,490
39	3,119	4,004	6,250	1,963	4,106	3,888	89	-4,858	4,580	842	-3,008	-1,083	-705
40	118	4,212	5,963	983	3,473	2,950	90	2,300	4,161	6,831	1,001	3,916	3,642
41	1,059	3,220	4,451	588	2,520	2,367	91	2,116	4,173	5,871	1,159	3,515	3,367
42	1,707	3,327	5,004	1,326	3,165	2,906	92	-2,074	4,771	2,898	-1,718	590	893
43	-950	4,487	3,031	-792	1,119	1,379	93	-1,520	4,248	2,150	-195	978	1,132
44	-4,846	3,547	-330	-1,479	-905	-802	94	-4,999	3,931	-190	-1,213	-701	-634
45	2,907	4,030	1,0/9	1,474	4,577	4,255	95	-5,083	3,923	-121	-559	-043	-018
40	-2,217	4,280	2,303	-2,200	149	200	90	1,529	4,371	751	702	3,087	3,038
4/	3,791	3,320	2,004	3,131	4,378	4,000	9/	-3,015	4,313	101	-010	70	302
40	4,027	3,049 2,049	7,299	3,368	0,444 5,676	4,041	30	390	4,071	4,147	910	2,031	2,002
50	7,303	2,800	7,007	3,002	0,070	4,820 600	100	-4,100	9,244	1 157	-314	-427	-220
00	-2,215	4,117	3,031	-2,301	300	000	100	-2,026	3,403	1,197	322	738	128

Table 3: Sydney: Simulation Results: All Cases: Present Value Subsidy Per Tenant Year

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases	Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
1	6,790	2,244	6,588	4,746	5,667	4,073	51	841	2,594	1,546	1,460	1,503	1,288
2	-547	4,388	1,554	-193	681	1,040	52	2,627	2,766	3,573	2,198	2,885	2,233
3	4,896	1,450	4,372	4,161	4,267	2,976	53	5,116	2,711	5,531	4,110	4,821	3,494
4	706	2,759	1,856	1,271	1,563	1,318	54	260	2,731	1,336	1,019	1,177	1,069
5	216	3,450	1,819	592	1,206	1,215	55	120	2,506	1,277	819	1,048	944
6	2,666	3,135	3,754	2,213	2,984	2,354	56	-891	3,953	1,271	-378	446	791
7	858	4,112	3,187	585	1,886	1,748	57	-54	2,786	1,396	1,189	1,292	1,063
8	3,593	2,882	4,453	2,798	3,626	2,745	58	-18	2,616	775	1,195	985	914
9	1,811	3,928	3,928	1,379	2,653	2,209	59	-1,875	2,872	-46	734	344	337
10	4,880	3,397	6,330	3,684	5,007	3,658	60	1,540	3,016	2,915	1,204	2,059	1,735
11	3,156	2,916	3,952	2,818	3,385	2,568	61	4,206	2,689	4,546	3,375	3,960	2,963
12	1,915	3,471	3,977	1,453	2,715	2,163	62	1,200	2,305	2,030	1,574	1,802	1,422
13	1,074	2,463	2,128	1,156	1,642	1,364	63	2,082	2,244	2,720	1,927	2,323	1,795
14	1,728	2,549	2,585	1,645	2,115	1,701	64	2,503	1,879	2,575	2,454	2,515	1,882
15	3,687	2,199	3,828	3,262	3,545	2,595	65	6,033	2,286	6,021	4,341	5,181	3,736
16	2,295	2,690	2,668	2,383	2,526	2,007	66	-940	3,811	967	11	489	770
17	1,705	2,195	2,254	1,842	2,048	1,599	67	-1,433	3,221	364	362	363	503
18	3,619	2,115	3,788	3,047	3,418	2,514	68	5,895	2,046	5,870	4,871	5,370	3,736
19	6,160	1,813	6,155	4,822	5,489	3,790	69	3,118	1,933	3,074	2,960	3,017	2,217
20	6,191	2,762	6,687	4,647	5,667	4,057	70	1,334	2,156	1,631	1,982	1,807	1,421
21	1,452	3,706	3,175	1,178	2,177	1,902	71	396	2,850	1,534	977	1,255	1,151
22	808	2,733	1,414	1,527	1,470	1,296	72	-1,373	2,612	487	118	302	369
23	3,517	2,564	4,415	2,967	3,691	2,692	73	844	2,460	2,039	1,033	1,536	1,275
24	1,378	2,601	2,177	1,554	1,865	1,542	74	-258	2,470	1,140	1,056	1,098	882
25	2,639	2,686	3,741	2,523	3,132	2,318	75	-141	2,898	738	1,181	959	935
26	3,357	2,870	4,164	2,851	3,507	2,648	76	5,141	2,837	5,776	3,617	4,696	3,474
27	3,324	2,037	3,531	3,030	3,281	2,384	77	1,062	1,692	1,397	1,612	1,505	1,153
28	2,956	2,492	3,296	2,704	3,000	2,290	78	2,669	2,941	3,079	2,545	2,812	2,247
29	5,503	1,319	5,305	4,451	4,878	3,316	79	2,382	3,100	3,097	2,236	2,667	2,163
30	6,838	2,329	6,436	4,928	5,682	4,106	80	-221	2,453	476	1,500	988	842
31	1,961	1,953	1,830	2,599	2,214	1,669	81	3,819	2,463	4,760	3,111	3,936	2,831
32	2,421	2,389	3,215	2,156	2,686	2,036	82	5,371	3,175	6,483	3,971	5,227	3,800
33	4,329	1,702	3,964	3,637	3,800	2,726	83	-2,190	3,707	449	-779	-165	237
34	5,766	2,410	5,710	4,127	4,919	3,603	84	4,303	2,346	4,699	3,591	4,145	2,988
35	1,342	1,540	1,862	2,033	1,948	1,355	85	4,198	3,574	5,771	2,968	4,369	3,302
36	-20	3,621	1,862	872	1,367	1,267	86	-1,626	3,399	963	121	542	571
37	951	3,404	2,129	1,259	1,694	1,549	87	5,825	1,559	5,601	4,630	5,115	3,523
38	1,591	3,011	2,817	1,443	2,130	1,772	88	7,153	2,603	7,180	4,815	5,997	4,350
39	4,496	1,793	5,116	3,511	4,314	2,983	89	-1,447	3,357	496	-188	154	444
40	3,465	2,961	4,629	2,669	3,649	2,745	90	5,224	3,108	5,868	3,982	4,925	3,636
41	3,033	2,759	3,908	2,686	3,297	2,477	91	3,755	3,541	4,696	2,983	3,839	2,995
42	3,781	2,134	3,725	3,683	3,704	2,665	92	1,894	2,375	2,359	2,000	2,179	1,726
43	1,269	2,073	2,325	1,403	1,864	1,414	93	1,467	2,068	1,611	2,147	1,879	1,459
44	-1,436	2,740	-30	845	407	424	94	-1,178	2,575	-225	1,505	640	535
45	3,953	4,207	5,529	2,844	4,186	3,307	95	-2,359	2,220	-768	750	-9	-31
46	772	3,129	2,618	914	1,766	1,487	96	3,509	2,446	3,934	2,959	3,446	2,570
47	2,438	3,109	3,414	1,997	2,706	2,192	97	26	1,833	366	1,712	1,039	788
48	4,318	2,914	4,843	3,448	4,146	3,105	98	2,279	2,138	2,702	2,272	2,487	1,878
49	5,354	2,992	5,792	4,151	4,972	3,658	99	-1,751	2,920	-210	564	177	305
50	738	3,159	2,385	671	1,528	1,390	100	5,222	1,955	4,791	4,241	4,516	3,242

Table 4: Canberra: Simulation Results: All Cases: Present Value Subsidy Per Tenant Year

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases	Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
1	6,658	1,781	6,010	4,196	5,103	4,750	51	1,505	1,689	1,023	2,094	1,559	1,574
2	1,109	1,712	951	1,481	1,216	1,294	52	3,136	1,773	2,734	2,637	2,685	2,593
3	3,742	1,672	3,296	2,952	3,124	2,957	53	6,440	1,368	5,319	4,915	5,117	4,632
4	1,865	1,379	1,242	2,442	1,842	1,754	54	608	1,853	466	1,418	942	1,058
5	1,106	2,144	1,041	1,390	1,215	1,379	55	804	1,495	576	1,477	1,026	1,076
6	4,583	1,257	3,894	4,104	3,999	3,567	56	431	1,692	1,101	923	1,012	1,032
7	2,341	1,556	1,981	2,035	2,008	1,984	57	349	1,667	138	1,589	864	921
8	4,703	1,850	4,273	3,608	3,940	3,675	58	-27	1,738	21	1,223	622	715
9	4,161	1,475	3,753	3,520	3,636	3,309	59	-812	1,706	-781	1,705	462	456
10	5,740	1,677	5,316	4,019	4,667	4,284	60	3,279	1,563	2,510	2,879	2,695	2,585
11	3,018	1,718	3,086	2,639	2,863	2,665	61	4,662	1,724	3,784	3,698	3,741	3,522
12	3,481	1,661	2,846	2,988	2,917	2,779	62	2,394	1,416	1,669	2,660	2,165	2,061
13	1,398	1,992	1,238	1,360	1,299	1,457	63	2,514	1,739	1,886	2,300	2,093	2,107
14	1,783	1,776	1,744	1,632	1,688	1,725	64	2,803	1,591	2,025	2,734	2,380	2,307
15	3,490	1,533	2,954	3,070	3,012	2,812	65	6,025	1,683	4,977	4,043	4,510	4,248
16	2,645	1,542	1,920	2,719	2,320	2,229	66	508	1,797	605	1,328	966	1,041
17	1,406	1,791	1,383	1,552	1,468	1,520	67	21	1,505	-254	1,693	720	737
18	3,458	1,765	2,856	2,754	2,805	2,728	68	5,282	1,652	4,490	4,223	4,356	4,001
19	5,556	1,523	5,141	4,061	4,601	4,176	69	2,734	1,614	2,290	2,571	2,431	2,328
20	6,414	1,620	5,536	4,459	4,997	4,605	70	1,872	1,506	1,164	2,578	1,871	1,798
21	3,390	1,800	2,431	3,039	2,735	2,679	71	1,551	1,625	1,407	2,064	1,735	1,676
22	117	1,589	460	956	708	766	72	-444	1,811	-276	1,005	365	492
23	3,496	1,566	3,415	2,847	3,131	2,891	73	1,697	1,711	1,300	1,860	1,580	1,630
24	1,856	1,803	1,502	2,031	1,766	1,792	74	1 007	1,598	501	1,402	951	906
25	2,854	1,643	2,764	2,686	2,725	2,534	75	1,067	1,363	815	2,239	1,527	1,402
26	3,708	1,437	3,075	3,123	3,099	2,888	76	4,954	1,875	4,958	3,302	4,130	3,844
21	3,290	1,443	2,007	2,919	2,703	2,599	70	243	1,090	1,230	1,100	1,202	1,208
20	2,770	1,013	2,820	2,480	2,700	2,002	70	3,040	1,307	2,200	2,080	2,000	2,432
20	0,770 6 260	1,075	5 700	4.250	5,995	4,626		1 150	1,000	2,121 E11	2,370	2,002	2,301
31	1 1 2 7	1,700	949	4,253	1 350	1 325	81	4 194	1,702	3 242	3 345	3793	3 126
32	3,059	1,440	2 914	2 726	2,820	2 629	82	6 138	1,550	5.076	4 222	4 649	4 345
33	2,608	1,828	2,514	1 815	2,828	2,320	83	145	1,841	-107	1 4 1 1	652	762
34	5 195	1,818	5 309	3,512	4 4 1 1	4 049	84	4 630	1,100	3 684	3.678	3.681	3 451
35	812	1 525	643	1 502	1.073	1 1 1 1	85	6.334	1,570	5 805	4 405	5 105	4 644
36	273	1,719	377	1.126	752	849	86	-541	1.738	-199	1,104	453	511
37	1,431	1,939	1,227	1,757	1,492	1,569	87	5,646	1,547	4,798	4,192	4,495	4,135
38	2,611	1,576	2,536	2,506	2,521	2,350	88	6,737	1,825	5,640	4,254	4,947	4,680
39	4,727	1,488	4,562	3,559	4,060	3,679	89	-588	1,811	620	617	619	616
40	3,901	1,963	3,380	2,977	3,179	3,080	90	5,364	1,587	4,964	3,878	4,421	4,043
41	2,243	1,761	2,061	1,850	1,955	1,974	91	4,617	1,540	4,153	3,590	3,872	3,554
42	3,002	1,496	2,981	2,824	2,902	2,641	92	2,490	1,435	1,755	2,563	2,159	2,081
43	2,610	1,564	2,257	2,815	2,536	2,357	93	1,279	1,386	1,258	2,006	1,632	1,512
44	-555	1,661	-578	1,668	545	548	94	-1,298	1,774	-799	1,404	302	277
45	6,426	1,483	5,221	4,557	4,889	4,515	95	-1,323	1,711	-1,271	1,852	291	252
46	2,071	1,814	1,512	2,209	1,861	1,893	96	4,148	1,792	3,767	3,415	3,591	3,342
47	4,034	1,400	3,183	3,565	3,374	3,111	97	121	1,705	270	1,821	1,046	993
48	5,169	1,398	4,070	4,070	4,070	3,755	98	2,535	1,809	1,965	2,472	2,218	2,200
49	5,221	1,519	4,848	3,898	4,373	3,972	99	-1,284	1,851	-206	988	391	348
50	1,866	1,527	1,692	1,724	1,708	1,703	100	638	1,577	717	2,161	1,439	1,307

Table 5: Hobart: Simulation Results: All Cases: Present Value Subsidy Per Tenant Year

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases	Case
1	4,526	1,864	5,974	2,735	4,355	3,891	51
2	-1,760	1,996	921	-1,403	-241	-97	52
3	-473	1,862	3,086	-1,048	1,019	889	53
4	-956	1,779	1,151	-366	392	400	54
5	-3,418	2,475	882	-2,987	-1,053	-820	55
6	1,711	1,714	3,185	1,244	2,215	2,014	56
7	-565	2,085	1,905	-854	526	619	57
8	1,749	2,268	3,573	919	2,246	2,151	58
9	901	2,395	2,937	340	1,638	1,642	59
10	3,404	1,756	5,549	2,204	3,876	3,358	60
11	-788	1,973	2,140	-1,145	497	535	61
12	939	2,249	3,234	437	1,836	1,739	62
13	-648	1,574	1,441	-685	378	412	63
14	-1,687	1,933	2,090	-1,821	135	130	64
15	909	1,258	2,536	573	1,554	1,366	65
16	-501	1,905	2,358	-516	921	833	66
17	-989	1,721	1,439	-762	338	349	67
18	1,470	1,807	3,115	837	1,976	1,841	68
19	1,887	1,859	5,027	947	2,987	2,541	69
20	3,807	1,360	5,927	2,498	4,213	3,561	70
21	330	2,084	2,509	12	1,260	1,239	71
22	-1,650	1,508	1,155	-774	190	86	72
23	1,951	1,520	3,163	1,351	2,257	2,048	73
24	-201	1,981	1,970	-54	958	931	74
25	-96	1,661	2,193	-223	985	904	75
26	1,336	1,843	3,519	822	2,171	1,938	76
27	-427	2,033	2,849	- 781	1,034	942	77
28	906	1,842	2,628	632	1,630	1,528	78
29	1,703	1,973	4,322	898	2,610	2,301	79
30	3,068	2,164	4,999	1,659	3,329	3,044	80
31	-1,029	867	//6	-283	246	116	81
32	224	1,943	2,343	-125	1,109	1,099	82
33	596	2,041	2,957	-158	1,400	1,367	83
34	3,289	1,898	5,555	2,026	3,790	3,312	84
35	-3,752	2,499	378	-2,961	-1,292	-1,026	85
35	-2,444	1,961	287	-1,519	-616	-466	86
3/	-1,358	2,/1/	1,310	-991	160	308	8/
38	-478	1,825	2,356	-083	830	771	88
39	1,649	1,971	4,495	883	2,089	2,337	89
40	1,111	1,977	3,494	308	1,901	1,078	90
41	290	1,947	2,482	-78	1,202	1,170	31
42	339 974	1,407	2,375	27	700	1,082	92
43	-371	2,030	1,748	-273	1 202	1 220	93
44	-4,100	1,040	-009	-1,074	-1,202	-1,220	94
40	2 201	2,400	4,841	2 2 2 2 2	2,02	2,400	90
40	-2,201 69	2,443	7.493	-2,212	-007	-306	90
41	1970	2,270	2,403	1 007	7,014	7.070	9/
40	2.072	2,218	3,084	1,007	2,480	2,312	30
50	2,278	1,448	4,084	1,320	2,710	2,372	35
50	-443	2,137	1,832	-556	638	122	100

Table 6: Perth: Simulation Results: All Cases: Present Value Subsidy Per Tenant Year

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
51	-921	1,217	952	-222	365	278
52	-82	2,088	3,151	-594	1,278	1,168
53	2,685	1,483	4,404	1,788	3,096	2,691
54	-1,906	2,169	539	-1,043	-252	-99
55	-2,373	1,776	486	-1,516	-515	-428
56	-3,786	2,380	191	-3,326	-1,568	-1,222
57	-3,271	1,660	-141	-1,822	-981	-911
58	-2,288	1,482	-11	-958	-484	-452
59	-4,223	1,631	-385	-1,682	-1,033	-1,138
60	-719	1,897	2,039	-1,137	451	506
61	2,405	1,353	4,510	1,645	3,078	2,598
62	-2,030	1,436	854	-1,525	-335	-320
63	-744	2,143	1,779	-939	420	532
64	-137	1,815	1,997	-183	907	880
65	2,452	2,248	5,306	1,247	3,276	2,906
66	-1,292	1,704	806	-401	202	204
67	-3,974	2,187	-574	-2,115	-1,344	-1,164
68	2,925	1,434	4,694	2,092	3,393	2,907
69	921	1,678	2,392	761	1,576	1,466
70	-2,042	1,891	639	-1,344	-353	-242
71	-1,705	1,691	764	-1,055	-145	-90
72	-3,898	1,841	-374	-2,406	-1,390	-1,246
73	-2,662	2,395	975	-2,329	-677	-460
74	-1,673	1,404	184	-239	-28	-71
75	-2,649	2,240	2	-1,075	-537	-404
76	2,716	1,958	4,500	1,559	3,030	2,753
77	-1,981	2,302	650	-1,293	-321	-129
78	15	1,979	2,621	-75	1,273	1,163
79	-993	2,457	2,462	-1,252	605	656
80	-3,816	2,229	-523	-1,951	-1,237	-1,060
81	552	2,164	3,646	-74	1,786	1,615
82	2,529	2,461	4,975	1,404	3,189	2,911
83	-2,630	1,925	-34	-1,179	-606	-505
84	1,896	1,985	4,079	1,087	2,583	2,326
85	3,298	2,230	5,525	1,962	3,744	3,352
86	-3,117	2,409	-283	-1,441	-862	-659
87	2,736	1,892	4,611	1,716	3,163	2,824
88	4,058	1,855	5,494	2,313	3,904	3,525
89	-5,713	3,235	-328	-4,404	-2,366	-1,915
90	1,674	1,833	4,275	740	2,508	2,206
91	1,463	2,010	4,138	/41	2,440	2,158
92	-1,910	2,745	2,060	-1,691	184	278
93	-860	1,084	1,290	1	045 550	552
94	-3,013	1,779	-797	-304	-000	-977
90	-4,792	2,479	-1,374	-1,401	-1,417	-1,313 1.480
90	199 2.07F	2,004	3,400	-307	1,518	1,402
92	-3,070 804	2.045	1 900	-1,200	-700	-700
99	-004	2,040	-846	-000	-2.096	_1 793
100	-2.254	2 158	-0-10	-468	-2,000	-163
		2,100	<u> </u>		200	

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
1	7,064	3,733	9,317	4,311	6,814	6,248
2	-2,504	4,503	1,943	-1,984	-21	387
3	4,107	2,674	5,835	3,106	4,471	4,039
4	-1,722	4,331	2,290	-747	771	985
5	-841	3,816	3,110	-418	1,346	1,403
6	3,536	2,941	5,228	2,872	4,050	3,725
7	1,194	3,355	3,865	799	2,332	2,309
8	1,858	4,892	5,843	742	3,292	3,325
9	2.098	4.219	5,273	1,363	3,318	3.254
10	4.152	3.574	7.138	2.525	4.832	4,444
11	3.032	2.845	4,758	2.557	3,657	3,370
12	2.776	2.940	5.367	2.093	3.730	3.381
13	1.660	2.373	3.184	1.678	2.431	2.265
14	1.244	3.759	3.948	1.035	2 491	2.495
15	3 245	2 116	4 710	2 707	3 708	3 297
16	470	4,041	4,220	442	2,331	2,301
17	937	2 691	2,975	1 176	2,001	1.971
18	2.896	2.977	4,992	2.037	3.515	3.283
19	3 252	4 850	7 790	1.877	4 833	4 520
20	5,809	3,503	8 785	3,860	6,323	5,656
21	1 351	3,000	4 141	974	2,532	2 448
22	-1 795	3 741	1.587	-654	466	669
23	2 364	3,832	5 110	1.523	3 316	3 229
24	877	3.017	3,079	1,025	2.077	2.025
25	777	3 373	4 4 6 8	614	2,011	2,020
26	1 205	4 222	5,603	693	2,341	2,333
27	7,000	7,200	4 693	1 913	3 303	3.040
28	2,401	2,040	4,000	2,003	3,303	2 912
29	3,904	2,818	9,220 6.958	2,000	4 755	4 369
30	6.406	3,771	9,330	4 129	6,135	5 701
31	1.046	2,664	2,575	1 965	2,770	2 104
32	1,040	2,004	2,510	1,000	2,210	2,104
33	4 179	1 968	5 225	3 198	4 212	3 746
34	5 287	3 172	7 7/9	3,100	5 805	5.051
35	-2.161	3,569	1,140	-1.115	218	412
36	-554	3 447	1 914	570	1 747	1 324
37	473	3 549	3 142	860	2 001	2,005
38	508	3 761	4 134	202	2,301	2,555
39	2.570	4 261	6.949	1 564	4 256	3 920
40	4 870	2 593	6,599	3 648	5 1 2 3	4 558
41	1.356	3 991	5.016	863	2 939	2,833
42	3 4 5 0	2 4 3 8	5 194	3 165	4 179	3,685
43	-1 227	4 4 9 4	3 608	-1 173	1 217	1 384
44	-5 244	4 819	-185	-1.896	_1 041	-709
45	5.032	3,093	7 742	3 337	5 539	4 947
46	-1 583	4 275	2 771	-1 547	812	9097 800
47	2 501	3 947	5 279	1.842	3.560	3.426
48	5.072	2,802	6 763	3 700	5,000	4 701
40	2,072 2,063	2,002	6.847	2,700	2,270 2,740	4,701
50	4,003	9,102	0,047	2,033	4,740	1,433
00	-887	3,919	3,408	-1,010	1,199	1,327

Table 7: Darwin: Simulation Results: All Cases: Present Value Subsidy Per Tenant Year

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
51	-1,993	4,669	2,235	-907	664	934
52	3,280	2,615	5,067	2,687	3,877	3,505
53	4,922	3,511	7,459	3,632	5,546	5,014
54	928	1,949	2,135	1,802	1,968	1,756
55	-1,799	3,607	1,702	-687	507	666
56	-2,701	4,010	1,782	-2,046	-132	183
57	33	2,223	1,401	1,606	1,504	1,353
58	-2,909	4,485	1,066	-1,165	-50	285
59	-1,260	2,224	695	1,893	1,294	969
60	1,480	3,994	4,572	948	2,760	2,751
61	4,928	2,832	6,855	3,762	5,309	4,737
62	470	3,468	3,769	986	2,377	2,214
63	622	3,286	4,177	368	2,273	2,145
64	2,313	3,172	4,621	2,210	3,415	3,146
65	5,632	4,005	7,919	3,469	5,694	5,344
66	-3,280	5,091	1,674	-2,092	-209	237
67	-1,276	3,044	1,249	993	1,121	1,026
68	5,112	3,544	7,617	3,961	5,789	5,204
69	1,071	4,049	4,727	917	2,822	2,717
70	968	2,243	2,363	1,819	2,091	1,897
71	151	2,611	2,319	829	1,574	1,497
72	-1,741	2,554	766	168	467	443
73	-400	4,132	2,886	-54	1,416	1,596
74	-1,696	3,509	1,311	169	740	806
75	-1,255	2,905	930	577	754	782
76	5,512	4,309	8,301	3,460	5,881	5,493
77	-357	3,041	2,606	479	1,542	1,462
78	2,781	2,479	4,191	2,573	3,382	3,081
79	2,065	2,226	3,776	1,805	2,791	2,533
80	-2,550	3,294	578	-158	210	275
81	4,010	2,985	6,410	3,031	4,720	4,231
82	6,224	2,523	7,852	4,269	6,061	5,386
83	-5,695	5,904	847	-3,594	-1,373	- 782
84	4,257	3,494	6,557	3,161	4,859	4,466
85	5,335	3,839	7,730	3,302	5,516	5,145
00	-1,786	2,980	1,062	300	/ 14	007
0/	3,310	4,420	7,252	2,017	4,030	4,328
00	1 760	4,470	0,800	3,700	0,330	0,833
09	1 600	5,580	1,120 8,008	-190	9 5 2 2	2.655
91	2,000	J,J47 4 034	6,000	207	4 202	3,000
92	708 108	3 1/18	3 179	744	4,202	1 906
93	-764	3,140	2 144	327	1,302	1,300
94	-7.984	3 945	147	649	398	431
95	-5.018	3 373	-1.010	-691	-851	-839
96	4 632	3 121	6,500	3 724	5 112	4 618
97	-3.059	4 163	674	-684	-5	218
98	1.632	3.271	3.813	1.543	2.678	2.587
99	-4.605	5.077	108	-1.567	-729	-343
100	3.052	4,608	6.539	2.074	4,307	4,116
	0,002	1,000	0,000	2,011	.,55.	1,119

Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
1	5,291	1,797	6,401	3,365	4,883	4,347
2	-103	2,483	1,180	236	708	901
3	3,199	1,861	4,125	2,443	3,284	2,982
4	-448	1,658	946	181	564	580
5	-496	1,878	983	-139	422	530
6	2,979	2,353	3,617	2,502	3,060	2,902
7	1,294	2,950	2,598	953	1,775	1,914
8	2,360	2,641	4,222	1,443	2,832	2,700
9	2,693	2,625	3,520	2,117	2,818	2,755
10	2,990	3,066	5,144	1,774	3,459	3,287
11	2,065	2,283	3,116	1,699	2,408	2,314
12	2,781	2,322	3,774	2,247	3,011	2,827
13	570	1,923	1,574	539	1,057	1,133
14	1,661	2,160	2,148	1,503	1,826	1,860
15	2,481	1,852	3,341	2,080	2,711	2,493
16	-102	2,912	2,115	-118	998	1,161
17	-758	3,939	1,789	-407	691	1,051
18	2,548	2,397	3,546	1,908	2,727	2,625
19	4,033	2,238	5,484	2,808	4,146	3,742
20	4,897	2,375	5,985	3,358	4,671	4,257
21	1,360	2,645	3,188	1,023	2,105	2,064
22	-1,055	2,301	607	-132	237	392
23	1,289	2,793	3,833	664	2,248	2,165
24	1,132	2,035	2,001	1,329	1,665	1,632
25	1,288	1,981	3,016	1,123	2,070	1,896
26	2,819	2,061	3,548	2,250	2,899	2,715
27	1,818	1,970	2,795	1,405	2,100	2,018
28	2,939	1,632	2,765	2,650	2,707	2,539
29	3,688	2,065	4,986	2,667	3,826	3,446
30	3,767	3,147	6,120	2,379	4,250	3,933
31	510	2,100	1,306	1,306	1,306	1,306
32	1,244	2,350	3,090	882	1,986	1,911
33	952	3,542	3,079	105	1,592	1,854
34	4,038	2,353	5,253	2,454	3,854	3,591
35	-1,286	1,945	582	-447	67	172
36	-1,532	2,677	1,206	-513	347	437
37	770	1,561	1,371	1,090	1,230	1,204
38	402	2,267	2,127	173	1,150	1,224
39	3,339	2,733	5,055	2,337	3,696	3,432
40	1,056	2,672	4,410	199	2,304	2,128
41	2,590	1,818	2,966	2,187	2,576	2,427
42	2,634	1,966	2,903	2,387	2,645	2,507
43	-821	3,276	1,746	-708	519	802
44	-1,326	1,565	-44	1,105	531	366
45	3,945	3,773	5,704	2,563	4,133	4,023
46	-723	2,965	1,534	-730	402	689
47	3,765	1,397	3,550	3,264	3,407	3,076
48	3,057	2,878	4,912	2,104	3,508	3,292
49	4,505	1,719	5,341	3,305	4,323	3,839
50	-31	3,026	1,848	-112	868	1,120

Table 8. Brisbane	Simulation	Regulte /	II Casos	Prosont V	ابتك متناد/	heidy Por	Tonant	Voar
Table 0. Disballe.	Simulation	Results. F	All Cases.	Flesent v	aiue Su	Delay rei	Tenanit	rear

51 486 1,883 1,770 1,204 1,487 1,366 52 1,307 2,388 3,087 806 1947 1907 53 4,790 2,018 5,490 3,870 4,580 4,109 54 -201 2,031 928 817 873 926 55 -2,013 3,338 555 1,044 -289 104 56 -2,776 3,908 513 -2,247 -867 -2,944 56 -2,502 3,736 85 -1,076 -491 -48 56 -2,631 1,060 -482 -155 -423 1,874 60 724 2,563 3,103 287 1,695 1,574 61 4,237 1,607 4,928 3,290 4,108 3,634 62 443 1,413 2,200 1,268 1,743 1,497 63 1,189 1,470 2,203 1,268	Case	Bonds	Rent Assistance	Home Loans	Pub Housing	Shared Equity	Mean: All Cases
52 1,307 2,388 3,087 906 1,947 1,1977 53 4,790 2,016 5,490 3,670 4,560 4,109 54 -20 2,031 828 817 873 926 56 -2,776 3,908 555 -1,094 -269 104 57 -1,146 2,233 138 325 2322 356 58 -2,881 2,060 -682 -1,076 -491 -48 50 -2,881 2,060 -682 -155 -423 -418 60 724 2,563 3,103 287 1,085 1,167 61 4,237 1,607 4,928 3,290 4,109 3,834 62 843 1,413 2,200 1,286 1,743 1,497 63 3,17 5,028 1,987 3,508 3,433 64 1,205 2,032 -161 629 239 3	51	485	1,883	1,770	1,204	1,487	1,366
53 4.790 2.016 5.490 3.670 4.580 4.109 54 -201 3.338 555 -1.094 -208 104 56 -2.013 3.338 555 -1.094 -208 104 57 -1.146 2.233 138 325 232 356 58 -2.502 3.736 95 -1.078 -491 -48 59 -2.881 2.060 -692 -1.55 -423 -418 60 724 2.563 3.103 287 1.685 1.674 61 4.237 1.607 4.928 3.290 4.109 3.634 62 843 1.413 2.200 1.987 3.508 3.433 63 1.516 3.127 5.028 1.987 3.508 3.433 66 1.516 3.127 5.023 1.987 3.508 3.433 66 4.846 1.876 4.842 3.860	52	1,307	2,388	3,087	806	1,947	1,907
54 -20 2,031 928 817 873 926 55 -2,013 3,388 555 -1,094 -289 104 56 -2,776 3,906 513 -2,247 -867 -294 57 -1,178 -491 -448 59 -2,881 2,060 -692 -155 -423 -418 60 724 2,563 3,103 287 1,685 1,674 61 4,237 1,607 4,928 3,290 4,109 3,634 62 843 1,413 2,200 1,286 1,743 1,497 63 1,168 2,185 2,445 1,868 2,068 2,031 64 1,768 3,127 5,028 1,987 3,508 3,433 66 1,996 3,034 433 936 -251 77 67 -1,205 2,032 -151 629 239 309 68	53	4,790	2,016	5,490	3,670	4,580	4,109
55 -2,013 3,338 555 -1,094 -269 104 56 -2,776 3,908 513 -2,247 -867 -294 57 -1,146 2,233 138 325 232 356 58 -2,502 3,736 95 -1,078 -491 -481 -48 59 -2,881 2,060 -682 -1,078 -491 -481 -48 60 724 2,563 3,103 287 1,695 1,674 61 4,237 1,607 4,928 3,290 4,109 3,634 62 843 1,413 2,200 1,286 1,675 1,557 63 1,189 1,870 2,155 994 1,575 1,557 64 1,768 2,185 2,445 1,888 2,068 2,031 65 3,616 3,127 5,028 1,386 3,433 66 4,848 1,876 4,842	54	-20	2,031	928	817	873	926
56 -2,776 3,908 513 -2,247 -867 -294 57 -1,148 2,233 138 325 232 356 58 -2,602 3,736 96 -1,078 -491 -48 59 -2,881 2,060 -682 -155 -423 -418 60 724 2,563 3,103 287 1,685 1,674 61 4,237 1,807 4,928 3,290 4,109 3,834 62 843 1,413 2,200 1,286 1,743 1,497 63 1,198 1,870 2,155 994 1,575 1,557 64 1,205 2,032 -151 629 239 309 66 -1,896 3,034 433 2,049 2,746 2,507 70 748 1,604 1,203 1,448 1,326 1,266 71 179 2,214 1,100 728 91	55	-2,013	3,338	555	-1,094	-269	104
57 -1,146 2,233 138 325 232 356 58 -2,881 2,060 -892 -155 -423 -418 60 724 2,653 3,103 267 1,895 1,874 61 4,237 1,607 4,928 3,290 4,109 3,834 62 843 1,413 2,200 1,286 1,743 1,497 63 1,189 1,870 2,155 994 1,575 1,557 64 1,768 2,185 2,445 1,688 2,066 2,031 65 3,516 3,127 5,028 1,987 3,508 3,433 66 -1,886 3,034 433 -936 -251 77 7 742 1,604 1,203 2,444 1,205 2,393 309 68 4,946 1,976 4,842 3,860 4,351 3,855 73 -1,603 3,291 1,406	56	-2,776	3,908	513	-2,247	-867	-294
58 -2,502 3,736 95 -1,078 -491 -481 59 -2,881 2,060 -692 -155 -423 -418 60 724 2,563 3,103 287 1,695 1,674 61 4,237 1,607 4,928 3,290 4,108 3,634 62 843 1,413 2,200 1,286 1,743 1,497 63 1,189 1,870 2,155 9,944 1,575 1,567 64 1,788 2,185 2,445 1,688 2,066 2,031 66 -1,886 3,034 433 -936 -251 77 67 -1,205 2,032 -151 629 239 309 68 4,946 1,976 4,842 3,960 4,351 3,955 69 2,192 2,104 1,100 728 914 1,027 70 748 1,604 1,203 1,448	57	-1,146	2,233	138	325	232	356
59 -2,881 2,060 -692 -155 -423 -418 60 724 2,563 3,103 287 1,695 1,874 61 4,237 1,607 4,928 3,290 4,109 3,634 62 843 1,413 2,200 1,286 1,743 1,497 63 1,788 2,185 2,944 1,686 2,066 2,031 64 1,768 2,185 2,445 1,868 2,066 2,031 66 -1,896 3,034 433 9,368 -251 77 67 -1,205 2,032 -151 628 2,38 3,09 68 4,946 1,876 4,842 3,660 4,351 3,955 69 2,192 2,105 3,443 2,049 2,746 2,507 70 748 1,604 1,203 1,448 1,326 1,268 71 1,763 3,220 -316 2,237 <th>58</th> <th>-2,502</th> <th>3,736</th> <th>95</th> <th>-1,078</th> <th>-491</th> <th>-48</th>	58	-2,502	3,736	95	-1,078	-491	-48
60 724 2,563 3,103 287 1,865 1,743 61 4,237 1,807 4,928 3,290 4,109 3,634 62 843 1,413 2,200 1,286 1,743 1,487 63 1,189 1,870 2,155 994 1,575 1,557 64 1,788 2,185 2,445 1,888 2,086 2,031 65 3,515 3,127 5,028 1,987 3,508 3,433 66 -1,896 3,034 433 -936 -251 77 67 -1,205 2,032 -151 629 239 309 68 4,846 1,874 4,842 3,660 4,351 3,955 70 748 1,804 1,203 1,448 1,328 1,286 71 179 2,214 1,100 728 914 1,027 73 -1,603 3,291 1,406 -1,237	59	-2,881	2,060	-692	-155	-423	-418
61 4.237 1.607 4.928 3.290 4.109 3.634 62 843 1.413 2.200 1.286 1.743 1.497 63 1.189 1.870 2.155 994 1.575 1.557 64 1.788 2.185 2.445 1.688 2.066 2.031 66 3.515 3.127 5.028 1.987 3.508 3.433 66 1.986 3.034 433 -936 -251 77 67 -1.205 2.032 -151 629 2.39 309 68 4.846 1.878 4.842 3.860 4.351 3.855 69 2.192 2.105 3.434 2.049 2.746 2.507 70 748 1.804 1.203 1.448 1.328 1.266 71 1.793 3.291 1.406 -1.094 156 451 74 -1.648 <th2.250< th=""> 232 127</th2.250<>	60	724	2,563	3,103	287	1,695	1,674
62 843 1,413 2,200 1,286 1,743 1,497 63 1,189 1,870 2,155 984 1,675 1,557 64 1,768 2,185 2,445 1,688 2,066 2,031 65 3,515 3,127 5,028 1,897 3,508 3,433 66 -1,886 3,034 433 -936 -251 77 767 -1,205 2,032 -161 629 239 309 68 4,846 1,876 4,842 3,860 4,351 3,955 69 2,192 2,105 3,443 2,049 2,746 2,607 70 748 1,604 1,203 1,448 1,326 1,266 71 178 2,214 1,100 728 914 1,027 73 -1,503 3,291 1,406 -1,194 156 451 74 -1,648 2,250 232 127	61	4,237	1,607	4,928	3,290	4,109	3,634
63 1,189 1,870 2,155 994 1,575 1,557 64 1,788 2,185 2,445 1,688 2,068 2,031 65 3,515 3,127 5,028 1,887 3,508 3,433 66 -1,896 3,034 433 -936 -251 77 67 -1,205 2,032 -151 629 239 308 68 4,846 1,876 4,842 3,860 4,351 3,955 69 2,192 2,105 3,443 2,049 2,746 2,507 70 748 1,604 1,203 1,448 1,326 1,286 71 179 2,214 1,100 728 914 1,027 72 -3,813 3,220 -316 -2,237 -1,278 -886 73 -1,680 2,228 29 15 22 127 74 -1,880 2,229 2,073 3,068	62	843	1,413	2,200	1,286	1,743	1,497
64 1,768 2,185 2,445 1,688 2,066 2,031 65 3,515 3,127 5,028 1,987 3,508 3,433 66 1,896 3,034 433 -936 -251 77 67 -1,205 2,032 -151 629 238 309 68 4,846 1,876 4,642 3,860 4,351 3,955 69 2,192 2,105 3,443 2,049 2,746 2,507 70 748 1,804 1,203 1,448 1,326 1,266 71 179 2,214 1,100 728 914 1,027 73 -1,503 3,221 -316 -2,237 -1,278 -885 74 -1,648 2,250 232 -121 56 154 75 -1,680 2,228 29 15 22 127 76 4,687 2,293 4,815 3,065 3	63	1,189	1,870	2,155	994	1,575	1,557
65 3,515 3,127 5,028 1,887 3,508 3,433 66 -1,896 3,034 433 -936 -251 77 67 -1,205 2,032 -151 629 239 309 68 4,846 1,876 4,842 3,860 4,351 3,955 69 2,192 2,105 3,443 2,049 2,746 2,507 70 748 1,804 1,203 1,448 1,326 1,226 71 179 2,214 1,100 728 814 1,027 72 -3,813 3,220 -316 -2,237 -1,276 -885 73 -1,603 3,291 1,406 -1,094 156 154 74 -1,848 2,250 232 -121 56 154 74 -1,847 2,390 2,068 2,229 2,073 77 -1,727 2,298 841 -912 -35	64	1,768	2,185	2,445	1,688	2,066	2,031
66 -1,886 3,034 433 -836 -251 77 67 -1,205 2,032 -151 629 239 309 68 4,846 1,876 4,842 3,860 4,351 3,955 69 2,192 2,105 3,443 2,049 2,746 2,507 70 748 1,604 1,203 1,448 1,326 1,266 71 178 2,214 1,100 728 814 1,027 73 -1,503 3,291 1,406 -1,094 156 451 74 -1,680 2,220 232 -121 56 154 74 -1,680 2,229 29 15 22 127 75 -1,680 2,293 4,815 3,085 3,850 3,766 77 -1,727 2,298 841 -912 -35 93 78 1,016 2,127 2,250 817 1,533	65	3,515	3,127	5,028	1,987	3,508	3,433
67 -1,205 2,032 -1,51 629 239 309 68 4,846 1,876 4,842 3,860 4,351 3,955 69 2,192 2,105 3,443 2,049 2,746 2,507 70 748 1,604 1,203 1,448 1,326 1,266 71 179 2,214 1,100 728 914 1,027 72 -3,813 3,220 -316 -2,237 -1,766 4851 74 -1,648 2,260 232 -121 56 154 75 -1,660 2,228 29 15 222 127 76 4,687 2,293 4,815 3,065 3,960 3,766 77 -1,727 2,298 841 -812 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1	66	-1,896	3,034	433	-936	-251	77
68 4,846 1,876 4,842 3,860 4,351 3,955 69 2,192 2,106 3,443 2,048 2,746 2,507 70 748 1,604 1,203 1,448 1,326 1,266 71 179 2,214 1,100 728 914 1,027 72 -3,813 3,220 -316 -2,237 -1,276 -885 73 -1,638 2,220 232 -121 56 154 75 -1,648 2,228 29 15 22 127 76 4,867 2,293 4,815 3,085 3,950 3,766 77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,260 817 1,533 1,549 80 -2,465 2,724 -203 -451 <t< th=""><th>67</th><th>-1,205</th><th>2,032</th><th>-151</th><th>629</th><th>239</th><th>309</th></t<>	67	-1,205	2,032	-151	629	239	309
69 2,192 2,105 3,443 2,049 2,746 2,507 70 748 1,604 1,203 1,448 1,326 1,266 71 179 2,214 1,100 728 914 1,027 72 -3,813 3,220 -316 -2,237 -1,276 -885 73 -1,603 3,291 1,406 -1,094 156 451 74 -1,648 2,250 232 -121 56 154 75 -1,660 2,228 29 15 22 127 76 4,887 2,239 4,815 3,065 3,950 3,766 77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,260 817 1,533 1,549 0 -2,465 2,724 -203 -451 -	68	4,846	1,876	4,842	3,860	4,351	3,955
70 748 1,604 1,203 1,448 1,326 1,266 71 178 2,214 1,100 728 914 1,027 72 -3,813 3,220 -316 -2,237 -1,276 -885 73 -1,503 3,221 1,406 -1,094 156 451 74 -1,648 2,250 232 -121 56 154 75 -1,660 2,228 29 15 22 127 76 4,687 2,293 4,815 3,085 3,950 3,768 77 -1,727 2,289 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 2,259 2,586 82 4,291 2,546 2,774 5,656	69	2,192	2,105	3,443	2,049	2,746	2,507
71 179 2.214 1,100 728 914 1,027 72 -3,813 3,220 -316 -2,237 -1,276 -885 73 -1,603 3,291 1,406 -1,094 156 451 74 -1,648 2,250 232 -121 56 164 75 -1,660 2,228 29 15 22 127 76 4,687 2,293 4,815 3,085 3,950 3,766 77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,818 3,604 1,595 2,586 3,908 82 4,291 2,546 5,656 2,814	70	748	1,604	1,203	1,448	1,326	1,266
72 -3,813 3,220 -316 -2,237 -1,276 -885 73 -1,603 3,291 1,406 -1,094 166 451 74 -1,648 2,250 232 -121 56 154 75 -1,860 2,228 29 15 22 127 76 4,687 2,293 4,815 3,085 3,950 3,766 77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,018 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,599 2,568 82 4,291 2,544 5,656 2,814 4,235 3,908 83 -2,746 2,406 -802 -427	71	179	2,214	1,100	728	914	1,027
73 -1,503 3,291 1,406 -1,094 156 451 74 -1,848 2,250 232 -121 56 154 75 -1,660 2,228 29 15 22 127 76 4,687 2,293 4,815 3,085 3,950 3,766 77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,599 2,586 82 4,291 2,544 5,856 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,618 <	72	-3,813	3,220	-316	-2,237	-1,276	-885
74 -1,648 2,250 232 -121 56 154 75 -1,660 2,228 29 15 22 127 76 4,687 2,293 4,815 3,085 3,950 3,766 77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,599 2,586 82 4,291 2,544 5,656 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,618 2,613 2,569 85 3,597 2,757 5,255 2,238	73	-1,503	3,291	1,406	-1,094	156	451
75 -1,680 2,228 29 15 22 127 76 4,687 2,293 4,815 3,085 3,950 3,766 77 -1,727 2,298 841 -812 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,599 2,586 82 4,291 2,544 5,856 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,181 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403	74	-1,648	2,250	232	-121	56	154
76 4,887 2,293 4,815 3,085 3,950 3,766 77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,699 2,586 82 4,291 2,544 5,656 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,618 2,613 2,569 3,597 2,757 5,255 2,238 3,747 3,519 85 3,597 2,767 5,104 1,631 3,318 3,058 88 5,174 2,842 6,753 3,204 <t< th=""><th>75</th><th>-1,660</th><th>2,228</th><th>29</th><th>15</th><th>22</th><th>127</th></t<>	75	-1,660	2,228	29	15	22	127
77 -1,727 2,298 841 -912 -35 93 78 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,599 2,586 82 4,291 2,544 5,656 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,618 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 88 5,174 2,842 6,753 3,204<	76	4,687	2,293	4,815	3,085	3,950	3,766
76 2,212 1,467 2,390 2,068 2,229 2,073 79 1,016 2,127 2,250 817 1,533 1,549 80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,598 2,586 82 4,291 2,544 5,656 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,618 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 88 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173	77	-1,727	2,298	841	-912	-35	93
79 1,016 2,127 2,250 817 1,533 1,549 80 -2,485 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,599 2,586 82 4,291 2,544 5,656 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -820 -427 84 2,406 2,602 3,607 1,618 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 86 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968	78	2,212	1,467	2,390	2,068	2,229	2,073
80 -2,465 2,724 -203 -451 -327 -144 81 2,317 2,816 3,604 1,595 2,599 2,586 82 4,291 2,544 5,656 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,618 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 86 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,4	79	1,016	2,127	2,250	817	1,533	1,549
81 2,317 2,816 3,804 1,595 2,599 2,586 82 4,291 2,544 5,856 2,814 4,235 3,908 83 -2,744 2,468 -84 -1,156 -620 -427 84 2,406 2,602 3,607 1,1618 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 86 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,885 1,763 <th< th=""><th>80</th><th>-2,465</th><th>2,724</th><th>-203</th><th>-451</th><th>-327</th><th>-144</th></th<>	80	-2,465	2,724	-203	-451	-327	-144
82 4.291 2.544 5.656 2.814 4.235 3.908 83 -2.744 2.468 -84 -1.156 -620 -427 84 2.406 2.602 3.607 1.618 2.613 2.569 85 3.597 2.757 5.255 2.238 3.747 3.519 86 -2.195 3.099 138 -403 -133 101 87 2.565 2.770 5.104 1.631 3.318 3.058 88 5.174 2.842 6.753 3.204 4.979 4.590 89 -1.763 2.359 173 -414 -121 47 90 4.291 1.431 5.232 2.968 4.100 3.604 91 3.342 2.855 4.462 2.448 3.456 3.313 93 -185 2.577 1.139 771 955 1.051 94 -2.859 2.199 -901 110 </th <th>81</th> <th>2,317</th> <th>2,816</th> <th>3,604</th> <th>1,595</th> <th>2,599</th> <th>2,586</th>	81	2,317	2,816	3,604	1,595	2,599	2,586
83 -2,744 2,468 84 1,156 620 427 84 2,406 2,602 3,607 1,618 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 88 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,885 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -901 1	82	4,291	2,544	5,656	2,814	4,235	3,908
84 2,406 2,802 3,807 1,618 2,613 2,569 85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 88 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,885 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -901 110 -396 -369 95 -2,361 1,762 -1,167 1,061	83	-2,744	2,468	-84	-1,156	-620	-427
85 3,597 2,757 5,255 2,238 3,747 3,519 86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 88 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,885 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -801 110 -396 -369 95 -2,361 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 <th>84</th> <th>2,406</th> <th>2,602</th> <th>3,607</th> <th>1,618</th> <th>2,613</th> <th>2,569</th>	84	2,406	2,602	3,607	1,618	2,613	2,569
86 -2,195 3,099 138 -403 -133 101 87 2,565 2,770 5,104 1,531 3,318 3,058 88 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,886 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -801 110 -396 -389 95 -2,361 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120	85	3,597	2,757	5,255	2,238	3,747	3,519
87 2,565 2,770 5,104 1,531 3,318 3,058 88 5,174 2,842 6,753 3,204 4,979 4,590 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,885 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -901 110 -396 -369 95 -2,361 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,456 2,497 2,636 1,468 <th>86</th> <th>-2,195</th> <th>3,099</th> <th>138</th> <th>-403</th> <th>-133</th> <th>101</th>	86	-2,195	3,099	138	-403	-133	101
36 5,174 2,642 6,753 3,204 4,379 4,379 4,380 89 -1,763 2,359 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,949 3,456 3,313 92 1,357 1,885 1,763 1,613 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -901 110 -396 -369 95 -2,381 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,388 1,665 23	0/	2,000	2,770	0,104	1,031	3,318	3,008
39 -1,783 2,353 173 -414 -121 47 90 4,291 1,431 5,232 2,968 4,100 3,604 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,885 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 965 1,051 94 -2,859 2,199 -901 110 -396 -369 95 -2,381 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,388 1,665 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	00	0,174	2,042	0,703	3,204	4,979	4,090
90 4,231 1,431 3,232 2,365 4,100 3,004 91 3,342 2,855 4,462 2,449 3,456 3,313 92 1,357 1,885 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -901 110 -396 -369 95 -2,361 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,368 1,665 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	09	4 001	2,358	5 000	-414	-121	97
91 3,342 2,403 3,430 3,431 92 1,357 1,885 1,763 1,513 1,638 1,631 93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -901 110 -396 -369 95 -2,361 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,368 1,665 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	90	9,201	2,431	0,232	2,300	9,100	3,004
93 -185 2,577 1,139 771 955 1,051 94 -2,859 2,199 -901 110 -396 -369 95 -2,361 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,818 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,368 1,665 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	91	1.257	2,000	1 762	1,510	1,400	1 621
94 -2,859 2,199 -801 110 -396 -369 95 -2,381 1,762 -1,167 1,061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,456 2,497 2,636 1,468 2,052 2,022 99 -1,368 1,665 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	92	1,007	2,577	1,705	771	955	1,051
95 -2,361 1,762 -1,167 1,1061 -53 -151 96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,368 1,665 23 988 505 363 100 2,350 2,121 4,523 1,685 3,054 2,727	94	-7.859	2,377	-901	110	-396	-369
96 4,151 1,424 3,649 3,376 3,513 3,223 97 -1,800 1,918 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,368 1,665 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	95	-2,000	1 762	-1.167	1.061	-53	-151
97 -1,800 1,918 -278 120 -79 -24 98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,388 1,865 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	96	4 151	1 424	3 649	3,376	3 5 1 3	3 223
98 1,458 2,497 2,636 1,468 2,052 2,022 99 -1,388 1,665 23 988 505 363 100 2,350 2,121 4,523 1,685 3,054 2,727	97	-1.800	1 918	-278	120	-79	-74
99 -1,368 1,665 23 988 505 363 100 2,350 2,121 4,523 1,585 3,054 2,727	98	1.458	2.497	2.636	1.468	2.052	2.022
100 2,350 2,121 4,523 1,585 3,054 2.727	99	-1,368	1,665	23	988	505	363
	100	2,350	2,121	4,523	1,585	3,054	2,727

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