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This paper contains advice that has been prepared by the Tax Working Group Secretariat for consideration by the Tax Working Group.

The advice represents the preliminary views of the Secretariat and does not necessarily represent the views of the Group or the Government.

Coversheet: Distributional analysis and incidence

Background Paper for Session 15 of the Tax Working Group August 2018

Purpose of discussion

This background paper is for the Group's information. It provides:

- descriptive information on household income and wealth by age, gender and ethnicity at the individual and group level,
- information on the potential direct (legislative) incidence of extending the taxation of capital income, and
- a discussion on how the potential distributional impact of extending the taxation of capital income will depend on the economic incidence.

Key points for discussion

- The distribution of income and net worth varies greatly not only between different subgroups of the population but also within these sub-groups,
- Revenue from extending the taxation of capital income, excluding owner-occupied housing is estimated to be mostly paid by the higher income and net worth deciles (this is because an increasingly larger proportion of taxable income is likely to be made up of taxable capital gains as the level of taxable income increased),
- Although the legislative incidence of the extension of capital income taxation will be on high income households (which may increase the progressivity of the tax system), this cost could be at least partially passed on to lower income households (e.g. in the form of increased rents).

Recommended actions

We recommend that you:

- a. note that the distributional impacts discussed in this paper are is subject to considerable uncertainty. The distributional impact will depend on the economic effects of the policy as discussed in the accompanying paper (*Potential High-level Effects of Extending the Taxation of Capital Income*).
- b. note the secretariat will undertake further quality assurance of the analysis for the interim report.
- c. indicate how the distributional issues should be discussed in the interim report.

Distributional analysis and incidence

Background Paper for Session 15 of the Tax Working Group

This paper contains advice that has been prepared by the Tax Working Group Secretariat for consideration by the Tax Working Group.

The advice represents the preliminary views of the secretariat and does not necessarily represent the views of the Group or the Government.

The Tax Working Group will release its interim report containing its recommendations in September and the views of the Group will be informed by public submissions alongside Secretariat advice.

August 2018

Prepared by the Inland Revenue Department and the New Zealand Treasury

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Executive Summary

This paper provides an overview of distributional evidence for income, expenditure and net worth in New Zealand, distributional analysis related to extending the taxation of capital income and a framework for assessing the legislative and economic incidence of taxation. This paper also includes new household and individual level analysis from Statistics NZ and the IRD that were not available at the time of the distributional analysis background paper provided by the Secretariat for Session 5.

Most of the analysis presented in this paper focusses on the direct, legislative incidence of policy change assuming all else equal. This analysis is unlikely to capture important changes that may occur over time. The section on incidence presents relative prices as one potential adjustment mechanism not necessarily captured with static analysis. There are, however, other adjustment mechanisms that can't be captured by static analysis.¹

The analysis presented in this paper uses the available data, however in most cases this is a second-best alternative limited by the data available in the New Zealand context. In particular, the data primarily allows for illustrative estimates using annual survey data. Major limitations include the lack of capital gains data at an individual or household level, a lack of data on household wealth dynamics over the lifetime, and limited economic modelling of the dynamic impacts of extending the taxation of capital income. The Secretariat recommends caution when inferring policy impacts from the analysis presented in this paper.

Key points

- The updated distributional analysis by age, gender and ethnicity shows that the distribution of income and net worth varies greatly not only between these different sub-groups of the population but also within these sub-groups.
- Additional analysis is provided which estimates that revenue from extending the taxation of capital income (excluding owner-occupied housing) would be mostly paid by the higher income and net worth deciles. This is because an increasingly larger proportion of taxable income likely consists of taxable capital gains as the level of taxable income increases.
- The paper provides a framework for assessing the economic incidence of taxation with the key insight that those who nominally pay the tax do not necessarily face the cost of the tax.
- It is important to note that although the legislative incidence of the extension of capital income taxation will be faced by high income households (which may increase the progressivity of the tax system), this cost could be at least partially passed on to lower

¹ One example is income mobility and the effect this has on long-term inequality. More information in the New Zealand context can be found in Creedy, Gemmell and Laws (2018).

income households in the form of increased rents. Such an incidence would likely be regressive, as it would affect low income households disproportionally more.

Some of the information provided should be considered preliminary and prepared for the purpose of discussion. The Secretariat will undertake further quality assurance of the analysis for the interim report.

1. Introduction

1.1 Context

- 1. The terms of reference of the Tax Working Group include consideration of whether the tax system operates fairly in relation to taxpayers, income, assets and wealth. Standard frameworks for considering fairness focus on principles such as horizontal and vertical equity. Judgements about equity in the tax system require value judgments, but can be informed by distributional analysis.
- 2. This paper builds upon analysis previously provided to the Group. The Secretariat has provided advice on equity concepts in 'Tax and Fairness' (background paper for session 2) and preliminary distributional analysis in 'Distributional Analysis' (background paper for session 5).

1.2 Purpose

- 3. This paper is for the Group's information.
- 4. The paper provides descriptive information on the distribution of income and wealth with respect to demographic characteristics, as requested by the Group in session 5.
- 5. The main purpose of the paper is to discuss the potential distributional impact of the policies being considered by the Group. It focuses on the distributional impact of extending the taxation of capital income, as the main specific proposal being considered by the Group.

1.3 Content and scope

- 6. Part 2 provides descriptive information on household income and wealth by age, gender and ethnicity at the individual and group level, as requested by the Group at session 5.
- 7. Part 3 provides indicative, descriptive information on the potential direct (legislative) incidence of extending the taxation of capital income. It presents data on taxable capital gains from the United States and Australia, New Zealand household economic survey data on assets and analysis of the distribution of untaxed capital gains at the industry level, using summarised financial statement data for Small and medium-sized enterprises (SMEs).
- 8. Part 4 discusses how the potential distributional impact of extending the taxation of capital income in the residential property area will depend on the economic incidence. The key insight is that that those who nominally pay the tax do not necessarily face the ultimate cost of the tax. It illustrates this point with reference to data showing the distribution of rents (paid and received) from residential property.
- 9. The analysis in this paper depends on various assumptions and is subject to data limitations. This analysis includes the distribution of income, wealth and assets by

household, individuals and at industry level. The analysis is based on a one year snapshot, and in some cases administrative data, and does not take account of lifetime effects or behavioural responses to taxation.

2. Distributional considerations

2.1 Concepts

- 10. What is fair ultimately rests on value judgements. However, there are generally two main principles that are used to help guide what is fair within tax policy. These are:
 - *Vertical equity:* The principle that those with higher income, or higher ability to pay, should pay a greater amount of tax.
 - *Horizontal equity:* The principle that people that are in the same position should pay the same amount of tax.
- 11. Progressivity is a feature of a tax system where the average tax rate rises with income. The percentage change in after-tax income is therefore a common indicator of the progressivity of a tax policy. In deciding the level of progressivity of the tax system various value judgements have to be made around what is deemed equitable.
- 12. Inequality refers to the distribution of resources. There are a range of measures of inequality. The appropriate measure will depend on value judgments although in practice is subject to data constraints. In particular, the measure of inequality will require judgments about the definition of income or other indicator of resources, the choice of accounting period (annual data is commonly used owing to data availability, although longer time periods, such as a lifetime, may be preferable) and the basic unit of analysis (e.g., the individual, household, or family).
- 13. The tax system may contribute to redistribution, commonly indicated by the difference in disposable income inequality before and after taxes (and transfers). It is important to note that progressivity and redistribution are related, but different, concepts. The degree of redistribution depends on the size and structure of taxes and transfers.

2.2 Distribution of household income, expenditure and wealth

- 14. The earlier background paper on distrbutional analysis provided a broad overview of the distribution of household income, net worth and expenditure in New Zealand. This paper provides an overview of the distribution of income and net worth by demographic characteristics (age, gender and ethnicity).
- 15. Figures 1 and 2 present the distribution of income, net worth and expenditure across household income deciles. This analysis is based on recent analysis of the Household Economic Survey (HES).² The charts provide a broad indication of the distribution of net worth and expenditure in comparison to income. It suggests that average income, net worth and expenditure are positively correlated across income deciles.³

² Access to the HES data was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975.

³ The median is used for net worth is used as this is robust to outliers. However, the respective data for mean net worth is provided in Table A (1) in Appendix A. There is considerable variation of net worth within deciles. In particular there

16. Income and net worth appear less equally distributed than expenditure in this one year snapshot. This is broadly consistent consistent with a life cycle pattern to earnings, consumption and wealth accumulation. The next section looks at individual income and net worth with respect to demographic characteristics, including age.



Figure 1: Comparison of disposable income and net worth by income decile⁴

Source: Statistics New Zealand (HES 2014/15) with subsequent Treasury calculations



Figure 2: Comparison of disposable income and expenditure by income decile

Source: Statistics New Zealand (HES 2015/16) with subsequent Treasury calculations

17. When considering low-income households it is recommended to focus on the decile 2 households rather than decile 1 households. This is because income data for decile 1 households is unreliable and this decile has a significant number of households with

are a number of high net worth superannuitants in income deciles 2 and 3, which may be affecting the results for the lower income deciles.

⁴ The technical assumptions for the charts in this paper are available in Appendix E.

implausibly low incomes (Perry, 2017). We have removed decile 1 from the figures in the main paper, however the data for decile 1 households can be found in in the attached Appendices.

2.3 Distribution by demographic characteristics

- 18. This section, and appendices, present the distribution of income and net worth by age, gender and ethnicity. There is a strong age pattern to the distribution of income and net worth. In addition, the Group previously requested information on the distribution of income and net worth by gender and ethnicity.
- 19. The data presented is for individuals in the Household Economic Survey in 2014/15. The use of individual, not household, data comes with significant caveats about attribution within the household. Individual income may be attributed unevenly in the household, even though the income may be shared with other members in the household (e.g., a couple with a single earner). Moreover, the income measure will exclude unpaid work. Assets and liabilities may be in common ownership for a couple, and so attributed equally between both, and therefore net worth may appear more equally distributed between gender than income.
- 20. Figure 3 presents the distribution of gross individual (regular) income and net worth by age and gender. It shows that there is a strong age pattern to income and net worth. It also shows a significant difference in median income between genders at each age group, while there is less difference in median net worth at each age group.



Figure 3: Median individual net worth and income by age and gender

Source: Statistics New Zealand (HES 2015) with subsequent Treasury calculations

21. Additional analysis of the distribution of income and net worth by age, gender and ethnicity is shown in Appendix A. The main conclusion is that there is significant inequality *within* demographic groups – by age, gender and ethnicity – as well as *between* demographic groups.

3. Distributional analysis of the direct incidence of extending the taxation of capital income

- 22. The purpose of this section is to consider the potential distributional implications of extending the taxation of capital income in New Zealand. Specifically, the discussion considers where the legislative tax cost might fall based on the limited available evidence.
- 23. To inform the discussion given the limited information in the New Zealand context, we start by discussing some of the Capital Gains Tax (CGT) distributional evidence available in the United States and Australia. The specific design of the CGT in these countries is likely to differ from any that may be introduced in New Zealand, and as result the results should be treated with some caution.

3.1 The distribution of capital gains in the US and Australia

- 24. The international data for United States and Australia suggest the direct, legislative incidence of capital gains taxation is progressive. Whether this holds in New Zealand will depend on the similarities of the underlying of distribution of income and the design details of the policies.
- 25. Appendix B has further information on the distribution of capital gains and tax revenue from capital gains among individual taxpayers by income band in the United States and Australia.

US data

- 26. The U.S. has comprehensive data on taxable capital gains. From the information and figures provided in Appendix B the following is evident:
 - In 2015 4.3 million individual taxpayers reported capital gain (from the 150 million that filed tax returns), and 19.9 million reported the sales of capital assets.
 - Table B (1) in Appendix B shows the distribution of individuals' capital gains by income band, and indicates that close to 88 per cent of capital gain is attributable to individuals in the top income decile.
 - Capital gains as a percentage of Adjusted Gross Income⁵ is the highest for the top income deciles. This shows that an increasingly larger proportion of taxable income was made up of taxable capital gains as the level of taxable income increased.

Australian data

The Australian Tax Office's (ATO 2015) tax statistics estimate that:

⁵ Adjusted gross income is total income (including losses), as defined by the Internal Revenue Code, less statutory adjustments—primarily business, investment, and certain other deductions.

- 27. Taxpayers in the top taxable income decile reported more than 70% of net capital gains. Individual tax payers in this decile are also responsible for paying the majority of capital gains tax (86 per cent).
- 28. Realised capital gains are lumpy over time, so the proportion of capital gains accruing to high income earners may be somewhat affected by the income measure. In other words, some income earners with lower lifetime incomes will have relatively high taxable incomes in the year they realise gains.
- 29. The Grattan Institute has examined the distribution of Australia's capital gains by taxable incomes before capital gains in order to adjust for this factor (Daley and Wood, 2016). According to this analysis, almost 40% of capital gains are earned by the top 10% of income earners.

3.2 Inferences from the distribution of household assets

- 30. The direct, legislative incidence of extending the taxation of capital income will be related to the taxable capital gains (and losses) of households. There is no available data on capital gains at individual or household level in New Zealand. In the absence of data on capital gains, inferences can be made based on the distribution of household assets. However, such inferences should be considered approximate and subject to considerable uncertainty. Moreover, such "static" analysis does not consider economic incidence, dynamic effects of policy and uses an annual snapshot of data and therefore will not reflect lifetime incidence.
- 31. Figure 4 below shows that the distribution of net worth in 2014/15 was concentrated among the top 10 per cent of households by net worth. These households hold approximately 53 per cent of total net worth.

Figure 4: Distribution of household net worth decile, by net worth decile



Source: Statistics New Zealand (HES 2015) with subsequent Treasury calculations

32. The distribution of net worth tends to be less concentrated when expressed by household income deciles. This mostly has to do with the higher concentration of

wealth when compared to income and also the re-ranking of households that have high net worth and relatively lower incomes levels.

33. The previous background paper on distributional analysis found that the top household net worth quintile held 82 per cent of total assets excluding cash, deposits and owner occupied housing.⁶ Using the same tax base as in the previous paper, figure 5 below shows the potential distribution of the capital gains tax liability when expressed as a percentage of disposable income by household net worth decile.



Figure 5: Estimated CGT liability and disposable income

Source: Statistics New Zealand (HES 2015) with subsequent Treasury calculations

- 34. Figure 5 should be considered an illustrative scenario, based on some broad assumptions. It assumes a nominal average capital gain of 3 per cent per annum. The respective average gains in each net worth decile are assumed to be taxed at an average effective marginal tax rate of 30 per cent.
- 35. The illustrative scenario in Figure 5 suggests that higher net worth deciles will carry a higher tax cost when expressed as a percentage of disposable income.

3.3 Distribution of capital gains at an industry level

- 36. While capital gains data is unavailable at the individual or household level, there is some distributional information available at the corporate level from IRD administrative data. This data can be used to indicate the potential direct incidence across industries.
- 37. In particular, financial statements summary data (IR10) can be used to provide statistical information on business activities carried on for a profit. It should however be noted that this data is incomplete because not all businesses file an IR10 as there is

⁶ See figure 22 in the Distributional Analysis (May 2018) background paper for Session 5 of the Tax Working Group.

no statutory requirement. The Group has already seen this data used for the paper on Effective Tax Rates.

- 38. The IR10 data has significant limitations. Although the majority of businesses do file IR10s, larger business entities generally provide this information through other processes. In terms of the coverage of IR10 filers (for the period under review), the 94% of companies that did file an IR10 only paid approximately 49% of company tax, compared to the 6% that did not file which paid roughly 51% of company tax.⁷
- 39. Figure 6 illustrates the untaxed realised gains and number of filers for each income band, indicating that the majority of filers are in the income band of up to \$100,000. However, average untaxed realised gains increases as the income band increases, suggestion some correlation between income and untaxed realised gains for small and medium-sized enterprises (SMEs).



Figure 6: Untaxed realised gains and number of filers by income band

Source: Inland Revenue (annual average 2013–2016)

40. Next we look at the distribution of untaxed realised gains by entity type and industry for SMEs. SMEs are defined as having total income less than \$30 million or accounting profit less than \$10 million.

⁷ In addition, IR10 data also suffer from zero (missing) values for certain categories, individual expense not adding up to total expenses or balance sheets that do not balance.





Source: Inland Revenue (SMEs - annual average 2013–2016)

41. Figure 7 show that untaxed realised gains are highest for entities such as trusts, companies, and partnerships, while untaxed realised gains as a percentage of total income is highest for individuals and other entities, followed by trusts and partnerships.⁸





Source: Inland Revenue (SME's - annual average 2013 - 2016)

⁸ Total income includes = trading profit + other income (dividends, interest, rental and other income).

⁹ This chart only illustrates information for the top 10 industries by untaxed realised gains. More complete information by industry can be found in Appendix D.

- 42. Apart from the property and lease industry, untaxed realised gains are highest for the finance and agriculture industries, with the average untaxed realised gains also being relatively larger for these three industries when compared to the rest.
- 43. Untaxed realised gains as a percentage of accounting profit as shown in figure 9 indicates that industries most affected by the introduction of a capital gains tax could include accommodation and food services, agriculture, forestry and fishing, real estate and financial and insurance services.

Figure 9: Untaxed realised gains and accounting profit (for top 10 industries)



Source: Inland Revenue (SME - annual average 2013-2016)

4. Incidence of taxation

4.1 Legislative and economic incidence of taxation

- 44. This section provides a framework for analysing the incidence of taxation through two concepts: legislative incidence and economic incidence. Legislative incidence refers to who legally pays the tax, whereas economic incidence refers to those who ultimately face the cost of the tax. In determining the economic incidence of any tax, information is needed on how market prices will react when the tax is introduced or changed. This is because taxes can be shifted to others through relative price adjustments (e.g. if a capital gains tax is imposed on landlords, some of the tax may be passed on to tenants in form of higher rents).
- 45. The distributional impact of a policy will ultimately depend on it economic incidence. The accompany paper, *Potential High-level Effects of Extending the Taxation of Capital Income*, discusses the potential economic effects from the proposals being considered by the Group.
- 46. The key insight from this section is that the economic incidence will be determined by the relative elasticities of supply and demand, which implies that the legislative incidence is irrelevant for determining who ultimately faces the cost of tax changes.
- 47. The standard distributional analysis assumption allocates tax based on legislative incidence¹⁰, however this implicitly assumes that the party with legislative incidence has no ability to pass the tax on to others.
- 48. Assessing the economic incidence of tax is challenging, even in cases like income tax where the legislative incidence is directly attributable to individuals. Using the example of an increase in personal income tax there are two extremes where the tax can fall employers and employees. Employers will absorb the full incidence of the tax increases if the employee's *after-tax* income remain constant, whereas employees will absorb the full cost of the tax increase if the employee's *before-tax* income remain constant.¹¹
- 49. Building on the income tax example, industries with an oversupply of (typically lower-income) workers are more likely to pass through to workers a higher proportion of the tax increase. Conversely, an undersupply of workers in an industry would be more likely to lead to the opposite, where incomes would increase at the employer's expense. In both cases the more elastic party passes the tax to the less elastic party, even though in both cases the tax is a legislated liability for the employee.
- 50. Another example is excise tax on tobacco, which is typically paid to the Government by the producer or importer of tobacco products. This does not, however, mean the producer would bear the cost of an increase in excise tax. Demand for tobacco is

¹⁰ Burman *et al*., (2005)

¹¹ For the purposes of this example we are ignoring general equilibrium effects, the impact of non-market price setting (like minimum wages), tax avoidance/evasion and other external influences.

relatively inelastic, which allows tobacco producers to transfer most of the tax to consumers through price increases.

51. In most cases the tax change will be split unequally between the affected parties through relative price adjustments, and this split may change over time. This will also apply to any extension of capital income taxation, where the additional tax will be split between the asset owners and those renting or purchasing these assets.

4.2 Potential impact on households of extending capital income taxation to other property

- 52. The accompanying paper on potential high-level effects of extending the taxation of capital income suggests asset and rental prices are important channels for determining the economic incidence of the policy. There is considerable uncertainty about this incidence, owing to uncertainty about the effects on these prices.
- 53. To the extent that the tax incidence falls on the owners of assets, the previous section discussing the direct, legislative incidence may be broadly consistent with the economic incidence. Economic modelling does suggest that higher rental prices are an expected impact of taxing capital gains on residential investment property. However, the timing and magnitude of any change in rents is uncertain, and will depend on what other policy measures are undertaken at the same time that could mitigate this effect.
- 54. This sections discusses the potential distributional impact of the additional tax of it does lead to higher rental prices. The indicative impact is illustrated through the distribution of rental payments (for those in rental accommodation) and rental income (for landlords) over household income deciles.



Figure 10: Household rent paid and received

Source: Statistics New Zealand (HES 2015) with subsequent Treasury calculations

55. Figure 10 that shows the average rent received and paid per income decile as a percentage of household disposable income for those that pay and receive rent (further

data is provided in Appendix E). This suggests that if the cost of a capital gains taxation regime is passed on to renters (thereby increasing rents), the economic incidence could disproportionally fall on lower income households (this is because as rent paid is on average a larger proportion of disposable income for these groups).

- 56. This may result in a regressive distribution of the additional tax when compared to the more progressive legislative incidence.
- 57. This analysis should be considered partial in that it has not considered other important potential channels of incidence, which are largely unquantifiable given available data. For example, taxing capital gains may in practice lead to the taxation of the returns to labour of business owners, where those returns are capitalised into the value of a business or asset. This could be one reason why the modelling in section 3 shows that capital gains tax might have a legal incidence that is more evenly spread across the income distribution than what has been found in Australia and the United States.
- 58. In conclusion, it is important to note that although the legislative incidence of the extension of capital income taxation will be on high income households (which may increase the progressivity of the tax system), this cost could be, to a certain extent passed on to lower income households in the form of increased rents. Such an incidence would be regressive, as it would affect low income households disproportionally more.

5. Conclusion

- 59. This paper has provided descriptive distributional information and a discussion of the distributional impact of extending the taxation of capital income.
- 60. A key message from the paper is that the distributional impact is subject to considerable uncertainty. The distributional impact will depend on the economic effects of the policy (discussed in the accompanying paper). The full distributional effects will also depend on how any new government revenue is used (eg, whether used for other tax changes or transfers to households), which is not considered in this paper.

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Appendix A: Distribution analysis tables

Disposable Income Decile	Mean Equivalised Disposable Income	Median Net Worth (RHS)	Mean Net Worth	Median Equivalised Net Worth	Mean Equivalised Net Worth	Weight
Decile 1	\$12,000	\$24,000	\$252,000	\$16,000	\$163,000	176,000
Decile 2	\$22,000	\$245,000	\$334,000	\$190,000	\$258,000	176,000
Decile 3	\$25,000	\$172,000	\$353,000	\$104,000	\$242,000	176,000
Decile 4	\$31,000	\$168,000	\$400,000	\$93,000	\$250,000	176,000
Decile 5	\$36,000	\$273,000	\$501,000	\$152,000	\$317,000	176,000
Decile 6	\$42,000	\$282,000	\$555,000	\$142,000	\$314,000	176,000
Decile 7	\$50,000	\$295,000	\$655,000	\$158,000	\$396,000	176,000
Decile 8	\$59,000	\$364,000	\$635,000	\$216,000	\$405,000	176,000
Decile 9	\$72,000	\$453,000	\$781,000	\$279,000	\$476,000	176,000
Decile 10	\$128,000	\$1,055,000	\$1,871,000	\$605,000	\$1,162,000	176,000

Table A (1) Comparison of disposable income and net worth by decile

Source: Treasury, Statistics New Zealand

Further distribution by	dependents.	benefit recipients	s and students
		,	

Household Income Decile	Dependents	NZS recipients	Main benefit recipients	Full-time students	Part-time students
1	30%	1%	25%	10%	2%
2	22%	50%	12%	3%	0%
3	29%	31%	7%	5%	1%
4	33%	11%	5%	5%	2%
5	28%	16%	3%	5%	2%
6	26%	10%	3%	5%	4%
7	20%	11%	2%	5%	3%
8	16%	13%	1%	4%	3%
9	12%	10%	0%	5%	5%
10	14%	12%	0%	2%	3%

* - Suppressed as the total number of sample units is below 10 or the total weighted count is below 3,000

The deciles are based on equivalised household disposable income, whereas the total refers to the number of individuals in each decile. There are an equal number of *households* within each decile, however the number of *individuals* within each household income decile may vary.

Individuals are prioritised based on grey block criteria from left to right, and if not part of one of these group they will be classified based on the highest income source. For example, a NZS recipient with self-employment income as the main source of income will be classified as NZS due to prioritisation. Similarly, a beneficiary who is also a student and earning the most income from other income will be classified as a beneficiary.

Access to the Household Economic Survey data was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented here are the work of Treasury, not Statistics New Zealand.

Disposable Income Decile	Mean Equivalised Disposable Income	Median Equivalised Expenditure	Mean Equivalised Expenditure	Weight
1	\$13,000	\$17,000	\$23,000	177,000
2	\$22,000	\$18,000	\$21,000	178,000
3	\$25,000	\$22,000	\$25,000	178,000
4	\$30,000	\$25,000	\$29,000	178,000
5	\$36,000	\$29,000	\$32,000	178,000
6	\$42,000	\$33,000	\$36,000	176,000
7	\$49,000	\$36,000	\$35,000	179,000
8	\$59,000	\$42,000	\$46,000	178,000
9	\$72,000	\$47,000	\$47,000	177,000
10	\$121,000	\$69,000	\$77,000	178,000

Table A (2) Comparisons of disposable income and expenditure

Source: Treasury, Statistics New Zealand

Table A (3) Descriptive statistics for distributional analy	sis.
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Gender	Age band	Mean net worth	Median net worth	Mean disposabl e income	Median disposabl e income	Rank Correlatio n between disposabl e income and net worth	Gini - disposabl e income	Gini - Net worth*	Percentag e with positive net worth (RHS)	Number of people
F	[15,25)	\$3,000	\$0	\$14,000	\$8,000	0.12	0.5894	0.8239	56%	304,000
F	[25,35)	\$68,000	\$25,000	\$33,000	\$34,000	0.16	0.3926	0.7208	80%	296,000
F	[35,45)	\$203,000	\$92,000	\$42,000	\$35,000	0.11	0.4614	0.6685	92%	305,000
F	[45,55)	\$373,000	\$183,000	\$40,000	\$36,000	0.20	0.4240	0.6524	95%	325,000
F	[55,65)	\$493,000	\$281,000	\$35,000	\$27,000	0.23	0.4835	0.6189	96%	270,000
F	[65,75)	\$471,000	\$293,000	\$32,000	\$23,000	0.30	0.3294	0.5833	97%	194,000
F	[75 +]	\$395,000	\$242,000	\$27,000	\$22,000	0.26	0.2519	0.5702	98%	137,000
М	[15,25)	\$16,000	\$2,000	\$17,000	\$10,000	0.24	0.5877	0.9008	63%	322,000
М	[25,35)	\$125,000	\$27,000	\$48,000	\$46,000	0.31	0.3159	0.8134	84%	280,000
М	[35,45)	\$240,000	\$104,000	\$59,000	\$53,000	0.36	0.3229	0.6932	91%	274,000
М	[45,55)	\$399,000	\$178,000	\$64,000	\$53,000	0.33	0.4047	0.6531	96%	299,000
М	[55,65)	\$622,000	\$276,000	\$57,000	\$45,000	0.31	0.4650	0.6708	97%	254,000
М	[65,75)	\$650,000	\$326,000	\$46,000	\$30,000	0.27	0.4257	0.6301	98%	183,000
М	[75 +]	\$622,000	\$273,000	\$32,000	\$21,000	0.39	0.3637	0.6664	97%	111,000

Source: Treasury, Statistics New Zealand

Notes:

- Negative net worth values have been coded to zero for the calculation of the Gini

- Rank correlation is used as the net worth data contains a number of "extreme" values which otherwise influence the linear correlation measure.

Table A (4) Income and net worth by	y age and	gender
-------------------------------------	-----------	--------

Measure by	Sex	Age group (years)									
-				25–34	35–44	45–54	55–64	65–74	75+	Total	
	Median (\$000) ⁽¹⁾										
Male											
	Total individual net worth(2)	2	*	27	104	177	276	324	272	88	
	Total individual regular income(3)	9	*	47	58	60	50	31	22	42	
Female											
	Total individual net worth(2)	0	***	25	* 92	183	281	293	240	86	
	Total individual regular income(3)	9	*	33	35	37	30	24	22	26	
Total											
	Total individual net worth ⁽²⁾	1	*	26	96	182	278	306	258	87	
	Total individual regular income ⁽³⁾	9		40	46	47	39	26	22	33	
1	1. Values are rounded to the nearest	thousand	I. Figu	res may no	ot sum to stat	ed totals, due	to rounding.				

2. Total includes a small number of individuals with no assets or liabilities.

3. Income is before tax, from regular and recurring sources only.

Symbols:

S suppressed. Estimates are suppressed for confidentiality reasons if fewer than 10 people contribute to the cell.

* Estimates with a sampling error between 21 and 50 percent, inclusive. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.

** Estimates with a sampling error between 51 and 100 percent, inclusive. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.

*** Estimates with a sampling error of 101 percent or greater. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.

Source: Statistics New Zealand

Table A (5) Income and net worth by ethnicity and gender

			Ethnic group ⁽¹⁾⁽²⁾								
Measure by Sex		European	Māori		Pacific people		Asian		Other ethnic group ⁽³⁾		Total ⁽⁴⁾
						Med	ian (\$0	00) ⁽⁵⁾			•
Male											
	Total individual net worth ⁽⁶⁾	117	20	*	13	*	36	*	41	**	88
	Total individual regular income ⁽⁷⁾	46	31		25		31		42		42
Female											
	Total individual net worth ⁽⁶⁾	111	24	*	11	*	31	*	117	*	86
	Total individual regular income ⁽⁷⁾	27	25		22		19		25		26
Total											
	Total individual net worth ⁽⁶⁾	114	23	*	12	*	32	*	67	*	87
	Total individual regular income ⁽⁷⁾	35	27		23		22		33		<u>33</u>

1. Ethnic groups in this table are created using the total response method. People were able to identify with more than one ethnic group; therefore, figures will not sum to the total population.

2. Medians have been age standardised when presented by ethnicity.

3. The category 'Other ethnic group' includes the 'New Zealander' responses, MELAA (Middle Eastern, Latin American, African ethnicity responses) and all other ethnicities not included elsewhere.

4. Total ethnic group includes the 'not specified' category.

5. Values are rounded to the nearest thousand. Figures may not sum to stated totals, due to rounding.

- 6. Total includes a small number of individuals with no assets or liabilities.
- 7. Income is before tax, from regular and recurring sources only.

Symbols:

- S suppressed. Estimates are suppressed for confidentiality reasons if fewer than 10 people contribute to the cell.
- * Estimates with a sampling error between 21 and 50 percent, inclusive. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.
- ** Estimates with a sampling error between 51 and 100 percent, inclusive. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.
- *** Estimates with a sampling error of 101 percent or greater. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.

Source: Statistics New Zealand

Table A (6) Income and net worth by ethnicity and age

						Eth	nic grou	p ⁽¹⁾⁽²⁾				
Measure by age group		European	Mād	ori	Pacific people		Asian		Other ethnic group ⁽³⁾		Total ⁽⁴⁾	
						Me	dian (\$0	00) ⁽⁵⁾				
Total individual net	t worth ⁽⁶⁾											
	15–24	1 *	0	***	0	***	1	***	1	***	1	*
	25–34	34	8	*	10	*	31	*	12	**	26	
	35–44	124	34	*	21	*	70	*	58	**	96	
	45–54	229	61	*	38	*	89	*	217	*	182	
	55–64	318	54	**	27	***	199	*	335		278	
	65–74	338	80	*	49	***	68	***	305		306	
	75+	277	130	*	26	***	6	۸	349		258	
Total		114	23	*	12	*	32	*	67	*	87	
Total individual reg	Jular income ⁽⁷⁾											
	15–24	11	9		6	**	6	*	4		9	
	25–34	42	30		31		40		39		40	
	35–44	48	40		40		42		46		46	
	45–54	51	40		33		38		47		47	
	55–64	42	33	*	22	*	18	**	40		39	
	65–74	28	22		19		17		28	*	26	
	75+	23	21		17		18		24		22	
Total		35	27		23		22		33		33	

2. Medians have been age standardised when presented by ethnicity.

3. The category 'Other ethnic group' includes the 'New Zealander' responses, MELAA (Middle Eastern, Latin American, African ethnicity responses) and all other ethnicities not included elsewhere.

4. Total ethnic group includes the 'not specified' category.

5. Values are rounded to the nearest thousand. Figures may not sum to stated totals, due to rounding.

- 6. Total includes a small number of individuals with no assets or liabilities.
- 7. Income is before tax, from regular and recurring sources only.

Symbols:

S suppressed. Estimates are suppressed for confidentiality reasons if fewer than 10 people contribute to the cell.

* Estimates with a sampling error between 21 and 50 percent, inclusive. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.

- ** Estimates with a sampling error between 51 and 100 percent, inclusive. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.
- *** Estimates with a sampling error of 101 percent or greater. Take care when interpreting these estimates, as they have less statistical reliability than those with a sampling error under 21 percent.
- A Sampling error was unable to be produced using chosen method.

Source: Statistics New Zealand

Table A (7) Gini coefficients

	Individua	al net worth	Gini	Lower confidence interval	Upper confidence interval				
	Sex	Male	0.78	0.76	0.80				
		Female	0.74	0.73	0.76				
	Age group (years)	15–24	S	S	S				
		25–34	0.86	0.81	0.91				
		35–44	0.72	0.67	0.76				
		45–54	0.66	0.62	0.70				
		55–64	0.66	0.61	0.71				
		65–74	0.61	0.57	0.66				
		75+	0.63	0.57	0.69				
	Ethnic group ⁽¹⁾	European	0.73	0.71	0.75				
		Māori	0.89	0.84	0.93				
		Pacific people	0.88	0.84	0.93				
		Asian	0.80	0.76	0.84				
		Other ethnic group ⁽²⁾	0.71	0.65	0.77				
	Total ⁽³⁾⁽⁴⁾		0.76	0.75	0.78				
1.	Ethnic groups in this table are created using the total response method. People were able to identify with more than one ethnic group.								
2.		nnic group' includes the 'New Z n ethnicity responses) and all							
3.	Includes the 'not speci	fied' category for ethnic group							

4. Total includes a small number of individuals with no assets or liabilities.

Note: cells may have negative net worth values contributing to the gini coefficient calculation. Gini coefficients should be used with caution, with this in mind.

Symbols:

S suppressed. Estimate is suppressed due to a large number of negative values resulting in a gini over 1.

Source: Statistics New Zealand

Individual r	Individual regular income		Lower confidence interval	Upper confidence interval
Sex	Male	0.50	0.48	0.51
	Female	0.49	0.47	0.50
Age group (years)	15–24	0.60	0.59	0.62
	25–34	0.40	0.38	0.43
	35–44	0.43	0.40	0.45
	45–54	0.46	0.44	0.49

1							
		55–64	0.54	0.50	0.58		
		65–74	0.44	0.41	0.47		
		75+	0.35	0.31	0.38		
	Ethnic group ⁽¹⁾	European	0.50	0.49	0.52		
		Māori	0.51	0.48	0.54		
		Pacific people	0.49	0.45	0.54		
		Asian	0.50	0.47	0.52		
		Other ethnic group ⁽²⁾	0.50	0.46	0.54		
	Total ⁽³⁾		0.50	0.49	0.52		
1.	Ethnic groups in this tab identify with more than c	le are created using the total one ethnic group.	response metho	od. People were	e able to		
2.							
3.	Includes the 'not specifie	ed' category for ethnic group.					
	Note: cells may have negative income values contributing to the gini coefficient calculation. Gini coefficients should be used with caution, with this in mind.						
Soι	Source: Statistics New Zealand						

Table A (8) Distribution of net worth by net worth decile

	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
Net worth (Million)	(4,750)	3,760	11,240	23,010	39,320	57,520	79,180	114,250	173,040	557,980
Households	167,000	167,000	167,000	167,000	167,000	167,000	167,000	167,000	167,000	167,000
(% total net worth)	0%	0%	1%	2%	4%	5%	8%	11%	16%	53%

Source: Treasury, Statistics New Zealand

Table A (9) D	Distribution of	net worth	by net worth	decile
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Decile	Disposable income	CGT liability as % of disposable income
1	52,800	0%
2	62,100	0%
3	76,900	1%
4	80,300	1%
5	90,600	1%
6	79,500	2%
7	79,900	3%
8	85,100	3%
9	97,900	5%
10	131,200	17%

Source: Treasury, Statistics New Zealand

Appendix B: International examples

Decile	Adjusted Gross Income (AGI) (USD)	Percent of returns	Percent of AGI	Percent of Capital Gains	Returns with Capital Gains	Gains as Share of AGI	Gains and QDI as Share of AGI	Interest Income as Share of AGI
1	< \$6,000	10.0%	-1.5%	2.3%	10.9%	N/A	N/A	N/A
2	\$6,000 to \$13,000	10.0%	1.4%	0.1%	6.5%	0.5%	1.4%	1.0%
3	\$13,000 to \$19,000	10.0%	2.3%	0.2%	6.1%	0.6%	1.3%	0.8%
4	\$19,000 to \$27,000	10.0%	3.4%	0.3%	6.8%	0.7%	1.3%	0.8%
5	\$27,000 to \$36,000	10.0%	4.7%	0.4%	8.3%	0.6%	1.1%	0.7%
6	\$36,000 to \$48,000	10.0%	6.0%	0.6%	10.0%	0.7%	1.2%	0.6%
7	\$48,000 to \$66,000	10.0%	8.7%	1.2%	15.4%	0.9%	1.7%	0.7%
8	\$66,000 to \$91,000	10.0%	11.0%	1.9%	19.6%	1.2%	2.0%	0.8%
9	\$91,000 to \$155,000	10.0%	17.6%	5.1%	30.0%	2.0%	3.2%	0.9%
10	\$155,000 to more	10.0%	46.3%	87.9%	47.7%	13.0%	16.1%	2.2%

Table B (1) Data for United States

Source: Internal Revenue Service (2015) data with subsequent calculations by The Treasury

	Capital gain distributions		Sales of ca	Schedule D [2]			
Number of returns		reported on Form 1040			Taxable net loss		
	Number of returns	Amount +	Number of returns	Amount +	Number of returns	Amount -	
15,049,326	296,583	\$298,088	503,644	\$17,837,162	832,897	\$1,924,801	
15,049,326	219,572	\$292,914	381,751	\$1,350,365	376,824	\$842,102	
15,049,326	215,323	\$318,336	381,513	\$1,863,943	328,270	\$729,280	
15,049,326	222,688	\$389,456	448,476	\$2,784,250	358,366	\$783,973	
15,049,326	263,266	\$448,072	528,126	\$3,324,991	451,982	\$956,873	
15,049,326	331,278	\$563,653	687,192	\$4,744,957	483,577	\$1,035,182	
15,049,326	478,637	\$1,085,917	1,076,831	\$8,873,953	754,962	\$1,688,055	
15,049,326	586,173	\$1,399,539	1,413,897	\$13,852,382	956,209	\$2,114,928	
15,049,326	807,772	\$2,524,334	2,278,102	\$36,586,844	1,432,625	\$3,148,353	
15,049,325	901,958	\$4,242,892	3,975,239	\$622,379,244	2,304,070	\$5,422,771	
150,493,262	4,323,250	\$11,563,201	11,674,771	\$713,598,091	8,279,782	\$18,646,318	
	15,049,326 15,049,326 15,049,326 15,049,326 15,049,326 15,049,326 15,049,326 15,049,326 15,049,326 15,049,325	Number of returns reported on Fo Number of returns Number of returns 15,049,326 296,583 15,049,326 219,572 15,049,326 215,323 15,049,326 222,688 15,049,326 263,266 15,049,326 331,278 15,049,326 478,637 15,049,326 586,173 15,049,326 807,772 15,049,325 901,958	Number of returns Number of returns Amount + 15,049,326 296,583 \$298,088 15,049,326 219,572 \$292,914 15,049,326 215,323 \$318,336 15,049,326 222,688 \$389,456 15,049,326 263,266 \$448,072 15,049,326 263,266 \$448,072 15,049,326 331,278 \$563,653 15,049,326 331,278 \$563,653 15,049,326 586,173 \$1,085,917 15,049,326 586,173 \$1,399,539 15,049,326 807,772 \$2,524,334 15,049,325 901,958 \$4,242,892	Number of returns Capital gain distributions reported on Form 1040 Tax net Number of returns Amount + Number of returns 15,049,326 296,583 \$298,088 503,644 15,049,326 219,572 \$292,914 381,751 15,049,326 215,323 \$318,336 381,513 15,049,326 222,688 \$389,456 448,476 15,049,326 263,266 \$448,072 528,126 15,049,326 263,266 \$448,072 528,126 15,049,326 331,278 \$563,653 687,192 15,049,326 381,773 \$1,085,917 1,076,831 15,049,326 586,173 \$1,399,539 1,413,897 15,049,326 807,772 \$2,524,334 2,278,102 15,049,325 901,958 \$4,242,892 3,975,239	Number of returns Capital gain distributions reported on Form 1040 Taxable net gain Number of returns Amount + Number of returns Amount + 15,049,326 296,583 \$298,088 503,644 \$17,837,162 15,049,326 219,572 \$292,914 381,751 \$1,350,365 15,049,326 215,323 \$318,336 381,513 \$1,863,943 15,049,326 222,688 \$389,456 448,476 \$2,784,250 15,049,326 263,266 \$448,072 528,126 \$3,324,991 15,049,326 263,266 \$448,072 528,126 \$3,324,991 15,049,326 331,278 \$563,653 687,192 \$4,744,957 15,049,326 478,637 \$1,085,917 1,076,831 \$8,873,953 15,049,326 586,173 \$1,399,539 1,413,897 \$13,852,382 15,049,326 807,772 \$2,524,334 2,278,102 \$36,586,844 15,049,325 901,958 \$4,242,892 3,975,239 \$622,379,244	Number of returns reported on Form 1040 Taxable net gain Tax net gain Number of returns Amount + Number of returns Number of returns Amount + Number of returns Amount + Number of returns Amount + N	

Table B (2) Data for United States

Source: Internal Revenue Service (2015) data with subsequent calculations by The Treasury



Illustrative charts based on the data above - United States (2015)





	Т	otal income	Ca	pital Gains	Tax on	Capital Gains	Percentage of	Percentage of Tax on	Capital Gains as %
Decile	Number of returns	Amount	Number of returns	Amount	Number of returns	Amount	Capital Gains	Capital Gains	of decile taxable income
1	1,202,132	\$2,273,549,652	40,439	\$285,060,195	1,938	\$1,920,507	2.0%	0.0%	12.5%
2	1,296,429	\$19,121,054,573	46,138	\$174,999,847	1,840	\$2,125,200	1.2%	0.0%	0.9%
3	1,296,429	\$28,983,342,181	50,781	\$246,087,758	16,432	\$4,677,943	1.7%	0.1%	0.8%
4	1,296,429	\$39,978,583,731	50,635	\$301,419,261	36,732	\$18,130,077	2.1%	0.4%	0.8%
5	1,296,429	\$49,503,297,329	45,724	\$324,976,555	43,338	\$32,312,254	2.3%	0.7%	0.7%
6	1,296,429	\$60,840,962,232	44,350	\$346,912,183	44,158	\$51,536,394	2.4%	1.1%	0.6%
7	1,296,429	\$75,075,700,689	49,257	\$456,682,627	49,145	\$85,905,929	3.2%	1.8%	0.6%
8	1,296,429	\$91,295,122,577	59,438	\$669,301,466	59,360	\$145,020,255	4.7%	3.0%	0.7%
9	1,296,429	\$121,897,861,610	80,107	\$1,234,034,584	80,015	\$318,405,233	8.6%	6.7%	1.0%
10	1,296,429	\$251,733,085,848	142,809	\$10,339,718,975	142,589	\$4,099,486,262	71.9%	86.1%	4.1%
Total	12,869,988	\$740,702,560,422	609,678	\$14,379,193,452	475,548	\$4,759,520,053	100.0%	100.0%	0

Table B (3) Data for Australia

Source: Australian Tax Office (2015) data with subsequent calculations by The Treasury.

Illustrative charts based on the data above - Australia (2015)





Appendix C: Industry IR 10 data

Total Income Band	count (number)	untaxed realised gains (\$ Million)	
in loss	158	32	
0	851	303	
1 to 100k	13,916	2,345	
100k to 250k	4,649	1,394	
250k to 500k	2,848	789	
500k to 1m	2,197	755	
1m to 5m	2,230	1,363	
5m to 10m	270	439	
10m to 30m	151	562	
greater than \$30m	42	388	

Table C (1) Annual average untaxed gains by income band (2013 – 2016)

Table C (2) Annual average untaxe	d gains by entity type	SMEs (2013 – 2016)
-----------------------------------	------------------------	--------------------

Entity type	Annual average untaxed realised gains (\$ Million)	Annual average untaxed realised gains as % total income
trust	2686	133%
company	2658	31%
partnership	1315	116%
individual	501	166%
Māori authority	16	30%
unit trust	5	36%
society/club	2	60%
superfund	1	85%
other	1	180%
government	0	51%

Source: In land Revenue

Table C (3): Annual average untaxed gains by industry SMEs (2013 – 2016)

Industry	SMEs' untaxed realised gains in \$M	SMEs average untaxed realised gains in \$
Property & lease	2,666	316,447
agriculture	1,462	298,017
finance	1,198	355,070
unknown	709	249,729
Prof / sci / tech services	164	169,378
retail	134	150,414
admin & support	134	191,150
other services	134	146,796
rest/accom	126	185,283
manufacturing	106	153,914
construction	100	80,834
wholesale	77	162,205
transport	60	132,705
health & social	53	162,537

arts & recreation	19	124,926		
education & training	17	138,079		
telecom/media	14	155,452		
utilities	6	161,558		
mining	3	116,566		
_public admin & safety	3	115,853		
Courses Intend Devenue				

Source: Inland Revenue

Table C (4): Annual average untaxed gains as accounting profit by industry SMEs (2013 – 2016)

Industry	Accounting profit (\$M)	Untaxed realised gains (\$M)	Untaxed realised gains as a % of accounting profit
Accommodation and Food Services	114	73	64%
Agriculture, Forestry and Fishing	783	412	53%
Rental, Hiring and Real Estate Services	1,909	763	40%
Financial and Insurance Services	792	217	27%
Arts and Recreation Services	57	8	14%
Other Services	175	23	13%
Education and Training	77	10	13%
Transport, Postal and Warehousing	357	41	11%
Administrative and Support Services	302	34	11%
Retail Trade	833	77	9%
Electricity, Gas, Water and Waste Services	62	5	8%
Manufacturing	1,067	79	7%
Information Media and Telecommunications	62	5	7%
Professional, Scientific and Technical Services	1,330	92	7%
Health Care and Social Assistance	480	33	7%
Mining	32	2	7%
Public Administration and Safety	26	1	6%
Wholesale Trade	1,082	54	5%
Construction	1,210	58	5%

Appendix D: Additional information on rents



Figure D (1) Median values of household rent paid and rent received

Source: Statistics New Zealand (HES 2015) with subsequent Treasury calculations

Equivalised household income decile	Average rent paid	Percentage of decile paying rent	Average rent paid for those who pay rent	Average rent paid as percentage of disposable income for those who pay rent	Average rent paid as percentage of household expenditure for those who pay rent	Average rent received	Percentage of decile receiving rent	Average rent received for those who receive rent	Average rent received as percentage of disposable income for those who receive rent
1	\$6,000	54%	\$11,100	S	41%	\$100	1%	\$10,800	S
2	\$2,900	24%	\$12,200	36%	41%	\$0	1%	\$7,500	18%
3	\$6,800	42%	\$15,900	37%	43%	\$100	2%	\$5,900	16%
4	\$7,000	40%	\$17,500	30%	36%	\$400	5%	\$8,100	17%
5	\$6,700	39%	\$17,200	27%	35%	\$800	7%	\$10,500	21%
6	\$6,000	32%	\$18,900	24%	32%	\$800	7%	\$12,200	15%
7	\$5,000	28%	\$17,600	20%	29%	\$800	7%	\$11,100	16%
8	\$5,500	27%	\$20,000	20%	29%	\$1,000	6%	\$16,800	18%
9	\$4,600	21%	\$22,500	19%	30%	\$1,500	7%	\$21,300	19%
10	\$2,700	13%	\$21,200	11%	18%	\$5,600	19%	\$29,100	17%

S =0

S - Values displayed as "S" have been suppressed due to data quality concerns related to the low-income households.

All dollar amounts have been rounded to the nearest \$100. This is <u>not</u> the level of precision supported by the source data, which is significantly larger than \$100.

Access to the Household Economic Survey data was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. The results presented here are the work of Treasury, not Statistics New Zealand.

Appendix E: Additional information on Figures 1 to 10

Chart	Data source	Notes	
Figure 1: Comparison of disposable income and net worth by income decile	HES 2014/15	Negative values and zeros are included in the data / Disposable income equivalised using Jensen 88 / net worth unequivalised / all data uses annual accounting period / household is the unit of analysis	
Figure 2: Comparison of disposable income and expenditure by income decile	HES 2015/16	Negative values and zeros are included in the data / Disposable income and expenditure are equivalised using Jensen 88 / all data uses annual accounting period / household is the unit of analysis	
Figure 3: Median individual net worth and income by age and gender	HES 2014/15	Regular income is gross income from recurring sources / negative values an zeros are included in the data / disposable income and net worth are no equivalised / all data uses annual accounting period / individuals is the unit of analysis	
Figure 4: Distribution of household net worth by net worth decile	HES 2014/15	Negative values and zeros are included in the data / net worth unequivalised / all data uses annual accounting period / household is the unit of analysis	
Figure 5: CGT liability and disposable income	HES 2014/15	Negative values and zeros are included in the data / Disposable income unequivalised / all data uses annual accounting period / household is the unit of analysis / CGT liability is estimated as 3 per cent of the assets (excluding owner occupied housing cash and deposits) held by the households	
Figure 6: Untaxed realised gains and number of filers by income band	IR 10 (2013-16)	Unit of analysis is individual / negatives and zero are included / no equivalisation has been applied / all data uses annual accounting period / All IR 10 filers are included	
Figure 7: Untaxed realised gains by entity type	IR 10 (2013-16)	Unit of analysis is individual / negatives and zero are included / no equivalisation has been applied / all data uses annual accounting period / Only SME's who file IR 10's are included	
Figure 8: Untaxed realised gains by industry	IR 10 (2013-16)	Unit of analysis is individual / negatives and zero are included / no equivalisation has been applied / all data uses annual accounting period / Only SME's who file IR 10's are included	
Figure 9: Untaxed realised gains and accounting profit	IR 10 (2013-16)	Unit of analysis is individual / negatives and zero are included / no equivalisation has been applied / all data uses annual accounting period / Only SME's who file IR 10's are included	
Figure 10: Average household rent paid and rent received	HES 2014/15	Average rent paid excludes all household that do not pay rent / Average rent received excludes all household that do not receive rent / Negative values and zeros are included in the data / Disposable income for calculating deciles is equivalised using Jensen 88 / rent paid / received is unequivalised / the disposable income measure used for calculating rent received as a percentage of disposable income is unequivalised / all data uses annual accounting period - household is the unit of analysis	