

A note on the Reserve Bank inflation calculator

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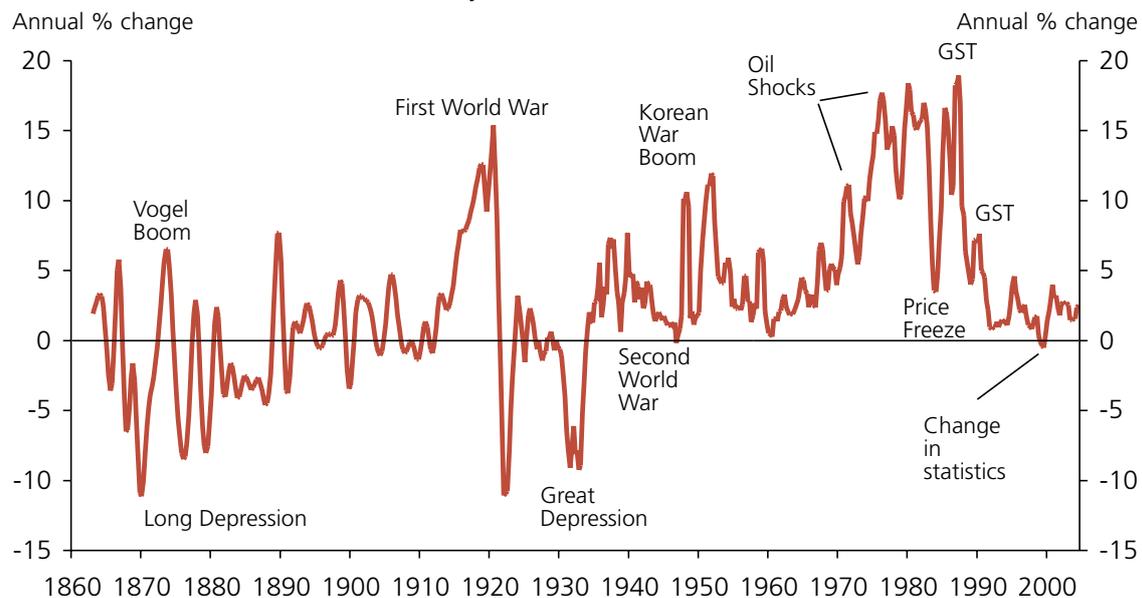
In June 2003 the Reserve Bank published an inflation calculator ("the Calculator") on its website. This application enables interested users to calculate the effect of inflation on a "basket" of goods and services between two dates selected by the user. The Calculator has attracted significant attention, and well over 20,000 "hits" were recorded on the Calculator's home page during 2004. Links to the Calculator were established on a number of financial, educational and government websites, including Statistics New Zealand and the official New Zealand government historical site. This article documents an extension to the Calculator, enabling it to provide estimates of purchasing power back to 1862.

Last year, the Reserve Bank released a web-based inflation calculator, enabling users to select two dates and a dollar amount, and calculate a figure adjusted for inflation between the dates. Initially the period covered by the Calculator included every quarter from the latest available back to 1919. The start date was chosen because only partial official data was available before then. However, it was known that unofficial estimates of inflation covering earlier years were in existence, and after the calculator had been in operation for some time, we decided that this material could be incorporated, as long as suitable cautions were given.

The start date of the Calculator was therefore extended back to the first quarter of 1862, which appears to be the earliest date for which useful figures are available. None of the data prior to 1925 is available on a quarterly basis so an interpolated quarterly track was generated to fill the unobserved quarters.

Some CPI observations are available between 1914 and 1919, and these were used to piece together a quarterly CPI index going back to 1914. The second source was an unofficial index of the prices of food and rent, averaged for the four main centres, which was once published by Statistics New Zealand (SNZ).¹ This series was used for the

Figure 1
Inflation rates 1862-2004 and selected key events²



¹ *New Zealand Official Year Book*, 1990, p 614.

² The removal of interest rates from the CPI regimen caused the apparent, but illusory, dip below zero inflation in 1999.

years between 1891 and 1913, and was linked into the first official CPI observation, the June 1914 quarter. The data between 1862 and 1890 comes from a 1911 publication by James W. McIlraith,³ in which the author provided price indices for general prices from the early 1860s to 1910. This index was used for the years between 1862 and 1890. We note, however, that this series is more akin to that of a GDP deflator (using general as opposed to consumer prices), so a degree of caution is advised where dates covering this period are entered.

The 1862-1914 data as a whole are not as comprehensive as the official CPI and should not be regarded as being of the quality of the official series, but it should provide a fairly reasonable gauge of CPI inflation over this period. The indices for these series have been rebased to the current CPI base (June 1999 quarter=1000) and linked to make a continuous series.

Please refer to the website notes about the calculator, or Wright and Howard (2003), for details on using the calculator.

References

– *New Zealand Official Year Book*, Statistics New Zealand, Wellington, 1990.

McIlraith, J. W., *The Course of Prices in New Zealand*, Government Printing Office, Wellington 1911.

Wright, M., and Howard, G., “The Reserve Bank Inflation Calculator”, *Reserve Bank of New Zealand Bulletin*, Vol. 66, No. 4, December 2003.

³ J. W. McIlraith, *The Course of Prices in New Zealand*, Government Printing Office, 1911