

***Briefing Paper:***

**The Long-Term Consequences of Wage Freezes  
for Real Wages, Lifetime Earnings, and Superannuation**

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On many occasions in Australian labour relations history, workers have been pressured or forced to accept multi-year freezes in their nominal wages, typically in circumstances in which their employer (whether a private firm or a public agency) claims some form of financial or fiscal difficulty. These wage freezes, usually lasting for 1-3 years (and sometimes longer) are often described as a painful but temporary sacrifice: a short-term period of restraint, supposedly followed by a return to normal compensation patterns.

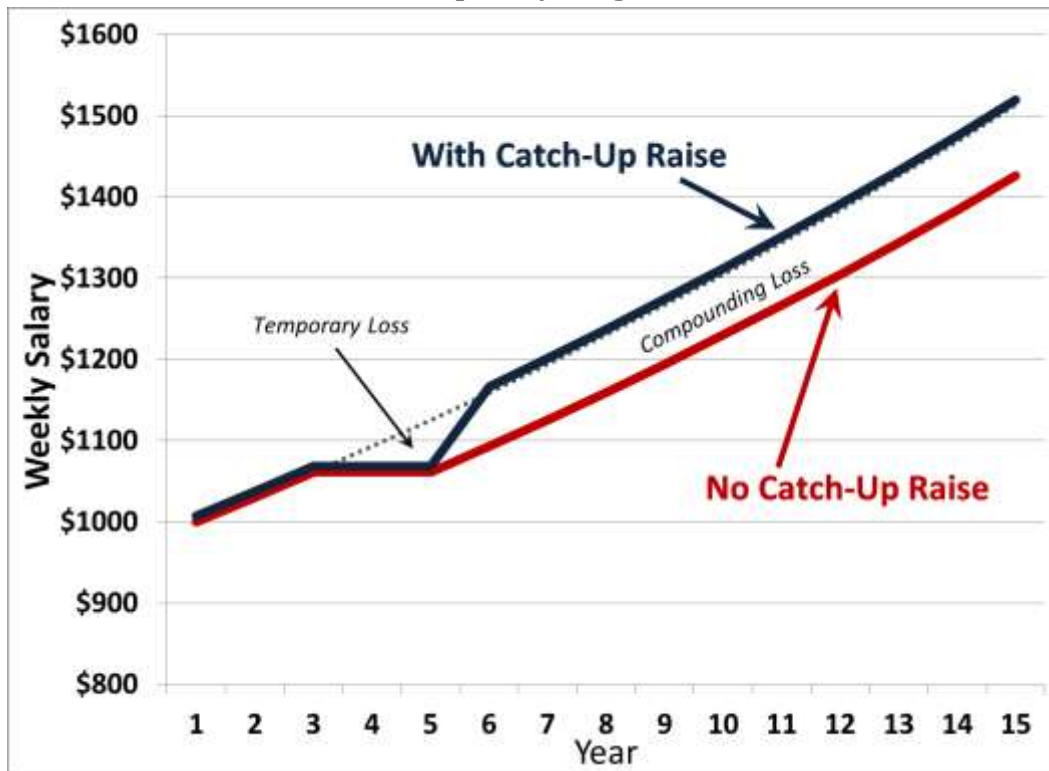
This description of wage freezes as causing only short-term financial losses is very misleading. Even if nominal wages begin to grow again at the end of the freeze period, in reality workers continue to experience growing annual losses. This is because the reduction in wage levels resulting from the wage freeze continues to be reflected in a ***permanent reduction in the nominal wage base***. Hence workers continue to experience losses long after the wage freeze has been lifted. The only way to prevent these continuing, compounding losses, and ensure that the income losses of a wage freeze are truly temporary, is if the employer offers extra “catch-up” wage increases to lift the wage fully back to the same level it would have reached under a “normal” wage trajectory (without the wage freeze).

This process of catch-up, however, rarely occurs. At best, at the end of the wage freeze, nominal wage increases are typically restored to a “normal” rate, in line with prevailing labour market practices at that time. Wages may even be supplemented with one-time bonuses or lump-sum payments. While this may make it seem like the damage has been “repaired”, the cumulative loss of income from the wage freeze in fact continues to grow – and at an increasing rate.

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<sup>1</sup> This briefing paper was commissioned by the Transportation Workers Union.

**Figure 1**  
**Cumulative Losses from a Temporary Wage Freeze**



Source: Author's calculations as explained in text.

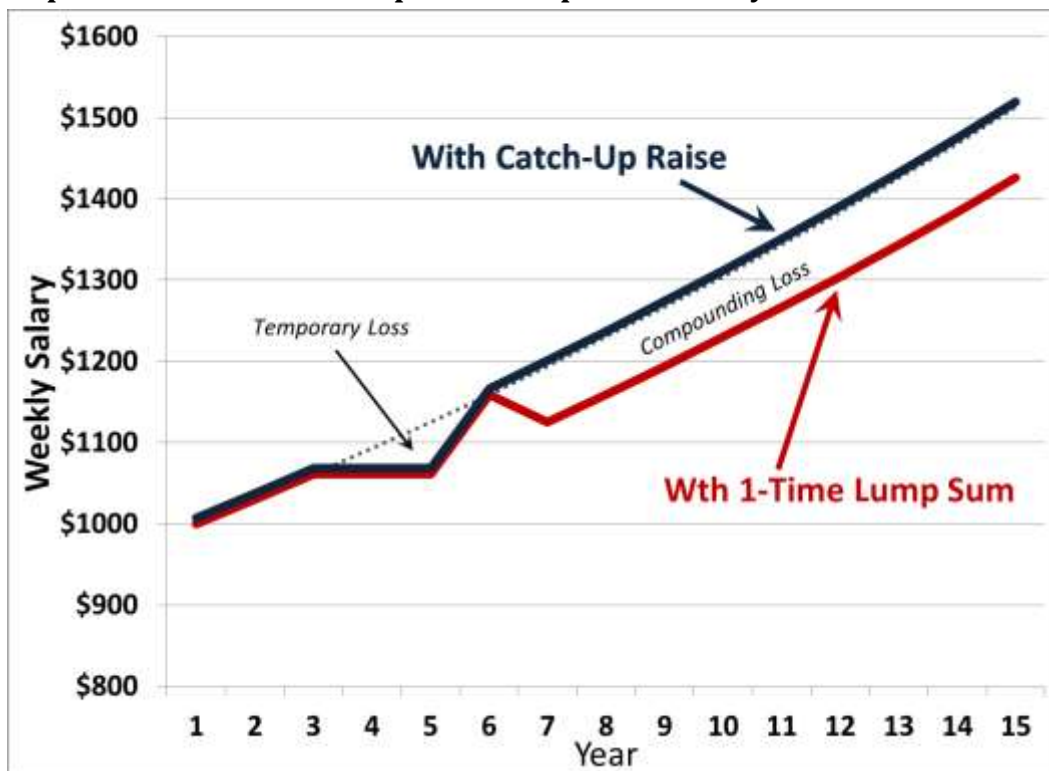
This mathematical reality is illustrated in Figure 1, which demonstrates the impacts of the application of a hypothetical 2-year freeze in nominal wages. The simulation assumes a “normal” rate of wage increase of 3%, applied to an assumed starting weekly salary of \$1000. But in the third year of the simulation, nominal wages are frozen for two years. In one case (illustrated in red), wages then begin increasing once again at the “normal” 3% rate. But no catch-up wage increase is implemented to offset the downward shift in the wage level resulting from the wage freeze. Wages begin to grow again, but remain permanently at a level lower than what would have prevailed without the wage freeze (indicated by the dotted line in Figure 1). The cumulative loss of income resulting from the wage freeze thus expands each passing year, despite the restoration of normal increases. In fact, the distance between actual wages and the “no freeze” path actually continues to expand gradually over time – due to the compounding effect of the annual wage gains being applied to a lower starting point.

The alternative, illustrated in blue, would be to implement an extraordinary one-time permanent wage increase after the expiration of the freeze, to take the wage level back to the level that would have prevailed without a freeze. In this example, a one-time increase of 9.3% would be required to bring wages back to their expected level in the absence of the wage freeze. In subsequent years, wages would then once again grow at the “normal” rate of 3%. Only in this case is the loss of income curtailed and finite: equal to the area of the triangle between the blue line and the hypothetical no-freeze wage

path. Even in this case, assuming 52 weeks of work per year, the worker loses a cumulative total of over \$5,000 during those two years. But at least after that point, those losses are capped, and the worker regains the annual income level that would have prevailed without the wage freeze. Without a catch-up increase, however, the annual losses get bigger every year – and the cumulative loss expands dramatically.<sup>2</sup>

An employer might try to partly ameliorate the loss of income associated with the wage freeze with a lump-sum payment, perhaps offered (during or after the wage freeze) as “compensation” for the sacrifice that workers have experienced. While these lump sums have value, of course, they certainly do not constitute full compensation for the ongoing income losses produced by the permanent reduction in the baseline trajectory of wages.

**Figure 2**  
**Impact of a One-Time Lump-Sum Compensation Payment**



Source: Author’s calculations as explained in text.

This scenario is illustrated in Figure 2. It shows a similar comparison of wage trajectories as in Figure 1 (with the wage freeze case in red, and no freeze in blue). But this time, in the year in which the two-year wage freeze is removed, workers receive a **one-time lump sum payment** which equalizes, for that year only, the difference between what they actually received in base wages that year, and what they would have earned if the wage freeze had never been implemented. For that year, total income

<sup>2</sup> In the illustrated example, the worker’s cumulative losses over just the first 10 years after the initial wage freeze total over \$35,000, and that amount grows through the rest of the worker’s career.

(averaged in weekly terms) rebounds to the baseline of the pre-freeze trajectory.<sup>3</sup> But in subsequent years income then falls back again to the lower trajectory established after the wage freeze. The one-time “compensation” offsets less than one-tenth of the true cumulative loss which workers experience as a result of the wage freeze, over just the first ten years following imposition of the wage freeze.

Without a commitment to truly lift wages back to their pre-freeze trajectory, therefore, even a temporary wage freeze imposes a ***growing lifetime economic burden*** on affected workers. Moreover, the ongoing loss of income has additional ramifications. While the wage freeze is in effect, the real spending power of workers’ incomes are diminished by the effects of ongoing inflation, causing an immediate loss of purchasing power. Nominal income losses then cumulate until the workers retire. But even then, the workers experience an additional loss of income that extends into their retirement. Because Australia’s superannuation system is financed through contributions paid on workers’ nominal incomes as they progress through their work lives, the permanent reduction in nominal wages resulting from even a temporary wage freeze causes an accumulating loss of superannuation contributions. The impact of lower contributions is then amplified by the loss of investment income on foregone contributions. And in turn, lower superannuation balances upon retirement result in a permanent reduction in the pension incomes which can be financed from those superannuation savings.

This briefing paper will provide an illustrative simulation of the long-term consequences of a temporary wage freeze, experienced through all of these three channels:

1. Erosion of real purchasing power during the freeze.
2. Compounding and permanent reductions in nominal incomes (in the absence of a catch-up wage increase).
3. Loss of superannuation contributions, and investment income on those contributions, producing a permanent reduction in pension income.

### ***Parameters of the Simulation***

To illustrate the scale of these various and substantial income losses from a temporary wage freeze, we refer to a real-world example of a wage freeze: an 18-month freeze in nominal earnings imposed on workers at Jetstar Airlines lasting from 15 September 2014 through 20 March 2016. Prior to that wage freeze, wages had been increasing by 3% per year, at annual intervals (the last raise taking place on 15 September 2013).<sup>4</sup>

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<sup>3</sup> In this particular example, a one-time lump sum payment of \$3460 (or \$66 per week) would be required when the wage freeze was lifted, to match the base income that would have been paid *in that year only* if the wage freeze had never been imposed.

<sup>4</sup> Nominal wages were thus held at the same level for 30 months, from September 2013 through March 2016, but the first 12 months of that period reflected the normal interval between annual wage increases rather than an extraordinary wage freeze.

The wage freeze ended with the implementation of a new enterprise agreement, which once again featured annual 3% increases in wages. No catch-up increase in base wages was provided,<sup>5</sup> but the company did pay a “discretionary” one-time bonus to workers after implementation of the new enterprise agreement in 2016. This bonus was equal to 5% of ordinary time earnings in the previous 12 months (that is, over the last full year of the wage freeze). This bonus approximately offset the lost 2016 income experienced by a typical worker as a consequence of the wage freeze: that is, it brought total compensation, for that year alone, up to the level that would have been achieved in the absence of the wage freeze.<sup>6</sup> But it did not compensate workers for the effects of the wage freeze during the 18 months it was in effect. And, more importantly, it did not restore the baseline trajectory of wages back to its pre-freeze level, with the result that workers will still experience continuing, growing income losses in subsequent years.

Although it has been several years since the wage freeze expired, the workers affected by it are still incurring ongoing and cumulating losses from that temporary freeze in nominal earnings. To illustrate the scale of these losses, we utilise three specific occupational categories – reflecting the range of income levels present within this company: GC1, GC3, and GC4, each classification assumed to have 4 years of experience. Other factors which affect the cumulative impact of the wage freeze include the worker’s age, and the number of hours which they typically work each year. We assume each worker is 35 and works normal full-time hours.<sup>7</sup> If they work part-time hours, then the losses experienced would be smaller; if they worked regular overtime hours, then the losses would be greater.

Table 1 summarises the three illustrative scenarios simulated below.

<b>Table 1</b>				
<b>Simulated Income Loss Cases: Jetstar Services</b>				
<b>Classification</b>	<b>Years of Experience</b>	<b>Weekly Wage When Frozen (15-09-2013)</b>	<b>Age</b>	<b>Weekly Hours</b>
GC1	4	\$784.79	35	38
GC3	4	\$842.45	35	38
GC4	4	\$997.38	35	38

Source: Author’s calculations as specified in text. Starting wages as specified in Jetstar-TWU enterprise agreement.

<sup>5</sup> To lift wages to where they would have been without the wage freeze, wages would have had to be increased by 6.1% in March 2016.

<sup>6</sup> In this regard the one-time bonus was very similar to the case illustrated in Figure 2. The bonus equaled 5% of ordinary-time earnings in the 12 months prior to March 2016, just slightly larger than the loss of income that would have occurred in 2016 from the reduction in baseline wages caused by the 18-month wage freeze.

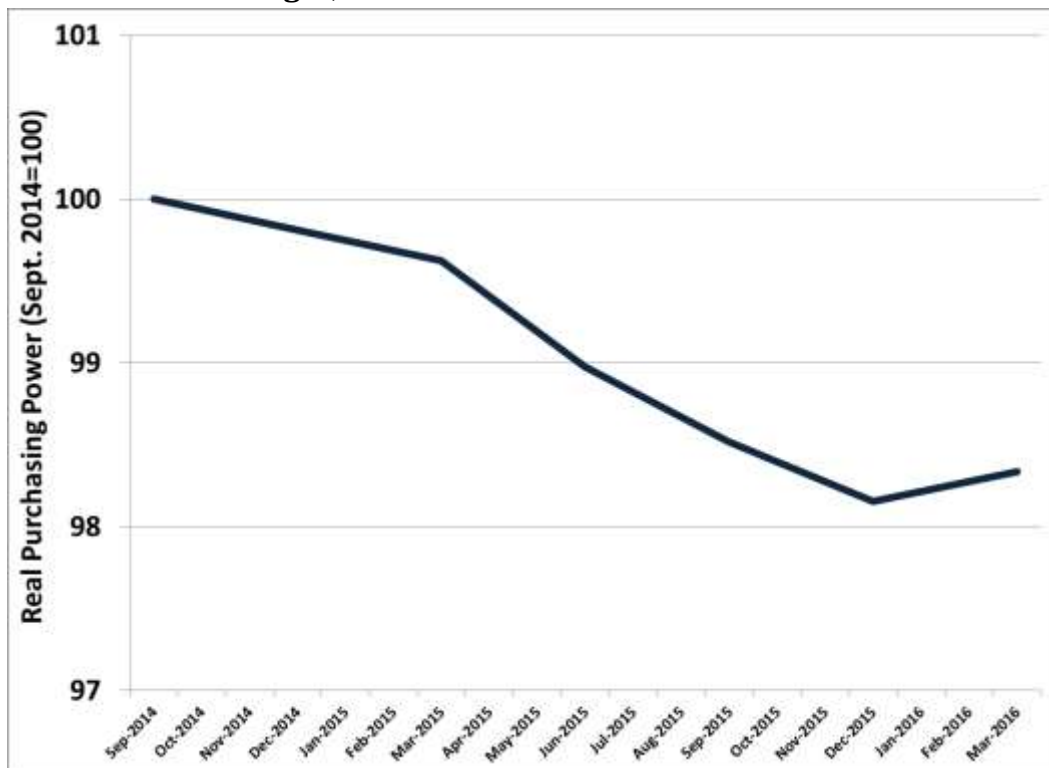
<sup>7</sup> The worker’s age matters for calculating their cumulative income losses until retirement, and the cumulative reductions in their superannuation balances.

### ***Real Wage Losses During the Freeze***

The imposition of a nominal wage freeze for an extended period of time normally produces a reduction in the real purchasing power of wages, due to increases in prices while the freeze is in effect.<sup>8</sup> This reduces the real quantity of consumer goods and services which the worker is able to purchase with their income during the freeze.

We simulate the real wage losses incurred by the three illustrative workers as follows. The rise in average consumer prices during the period of the freeze is measured by the increase in the all-items Australia-wide consumer price index, published by the Australian Bureau of Statistics.<sup>9</sup> The (frozen) nominal wage in each category is deflated by the proportional increase in the CPI, on a quarterly basis. The cumulative reduction in real purchasing power is then calculated over the 18-month period, using the assumed number of hours worked per week.

**Figure 2**  
**Erosion of Real Wages, 2014-2016**



Source: Author's calculations from ABS Catalogue 6201.0, Table 1.

<sup>8</sup> Even in the case of annual wage increments, some real wage reduction occurs during the course of the year, offset and normally surpassed by the next annual nominal wage increase. During an extended wage freeze, however, the loss of purchasing power cumulates steadily.

<sup>9</sup> ABS Catalogue 6401.0, Table 1.

Figure 2 illustrates the proportional erosion in real wages experienced over the 18-month period of the Jetstar wage freeze. Consumer prices grew gradually during this period, producing the steady decline in the real wage index shown in Figure 2.<sup>10</sup> Over the period covered by the wage freeze, real wages declined by a cumulative total of just under 2%. Table 2 indicates the cumulative real purchasing power losses that were incurred during the period of the wage freeze, based on the wage level for each of the three classifications chosen.<sup>11</sup> The combination of frozen nominal wage and ongoing increases in consumer prices reduces the real purchasing power of each worker's real wage by between \$13 and \$17 per week, generating a cumulative income loss over the 18 months of several hundred dollars. This is an immediate and permanent loss in consumption possibilities resulting from the wage freeze – but it is just the beginning.

<b>Table 2</b>		
<b>Purchasing Power Losses, Jetstar Workers, 2014-2016</b>		
<b>Classification &amp; Hours</b>	<b>Reduction in Real Weekly Wage by 20-03-2016<sup>1</sup></b>	<b>Cumulative Real Income Loss Over 18 Months</b>
GC1	\$13.06	\$671
GC3	\$14.01	\$720
GC4	\$16.60	\$853

*Source: Author's calculations from ABS Catalogue 6201.0 and TWU enterprise agreement. 1. Assumes 38 hours work per week in every case.*

### ***Cumulative Nominal Wage Losses During and After the Freeze***

As explained above, the loss of income resulting from the temporary wage freeze does not end with the restoration of nominal wage increases, because of the permanent and compounding reduction in the wage level against which future wage increases are applied. This ultimately ends up being the major cause of lost income from the wage freeze. We assume that without the wage freeze, wages would have continued to increase by 3% per year.<sup>12</sup> After that, wages are escalated in line with the 3% increases specified in the EA covering the 2016-2019 period, which are assumed to continue in subsequent years.<sup>13</sup> Table 3 summarises the scale of the ongoing losses experienced for each of the three workers considered above. (Recall that the scale of losses varies not

<sup>10</sup> Average consumer prices actually declined slightly in the March quarter of 2016, producing the small uptick in real wages at the end of the series.

<sup>11</sup> Once again, this simulation assumes a full-time worker, at 38 hours per week.

<sup>12</sup> Note that average wage increases in other enterprise agreements grew somewhat faster than 3% over the same period. The Attorney-General's Department's *Trends in Federal Enterprise Bargaining* reported average wage increases in private sector enterprise agreements of 3.3% over the period from September 2014 through March 2016. The assumption of 3% foregone wage increases is therefore conservative.

<sup>13</sup> The assumption of a return to 3% annual wage increases is provided for illustrative purposes only, and should not be interpreted as a forecast of actual wage increases negotiated at Jetstar in the future. If wage increases eventually accelerate to rates higher than 3% (as anticipated, for example, in the Commonwealth government's 2019-20 federal budget forecast), then cumulative income losses will be larger than estimated here.

only with each worker’s wage, but also with the number of hours worked and the number of years until retirement.) We assume that all workers retire at age 65.

<b>Table 3</b>			
<b>Wage Losses from Wage Freeze, Jetstar Services</b>			
<b>Classification</b>	<b>Wages Lost in 2020</b>	<b>Cumulative Wages Lost Since 2014</b>	<b>Cumulative Wages Lost by Retirement</b>
GC1, 4 yr	\$2150	\$10,569	\$115,934
GC3, 4 yr	\$2308	\$11,345	\$124,452
GC4, 4 yr	\$2733	\$13,432	\$147,339

Source: Author’s calculations as explained in text. Assumes a 35-year-old person working 38 hours per week, retiring at 65.

Even though annual nominal wage increases were restored beginning in 2016, the cost of that temporary freeze is substantial, and continues to grow over time. This coming year alone, each of the workers simulated will lose thousands of dollars in income as a result of their wages being almost 5% lower than they otherwise would have been. Over the entire period since the freeze was introduced, the cumulative losses experienced are larger: over \$10,000 per worker (depending on classification). And those losses will continue to grow over each worker’s remaining work life, reaching very large amounts. A 35-year-old full-time worker could experience a reduction in lifetime income of close to \$150,000 solely as a result of that 18-month nominal wage freeze.

### ***Implications of a Wage Freeze for Superannuation***

The shadow of the 2014-2016 wage freeze will fall even further, also affecting Jetstar workers’ retirement incomes. Because their nominal wages are permanently reduced by the 18-month freeze (by almost 5%), employer contributions into workers’ superannuation accounts are also reduced each year by an equivalent amount. We simulate this effect on the basis of the 9.5% superannuation guarantee rate in effect over this period.<sup>14</sup> We also assume a net nominal rate of return (after management expenses) of 6% per year, in line with recent experience of industry superannuation funds.<sup>15</sup>

Table 4 summarises the cumulative loss in superannuation contributions experienced by each of the simulation cases described above. These losses depend on income levels,

<sup>14</sup> For simplicity we have not assumed future increases in the SG rate. Assuming planned increases are implemented (as currently indicated by Commonwealth policy) beginning in 2021, rising to 12% by 2025, then the reductions in superannuation income indicated here will be even larger.

<sup>15</sup> This assumption is very conservative. Annualised investment returns over the past 5 years (to 30 June 2019) in TWUSuper’s balanced fund have been 7.42% (see <https://www.twusuper.com.au/investments/investment-returns/long-term-returns/>). Higher investment returns imply even larger losses from foregone superannuation than indicated in Table 4.



hours of work, and number of years each worker works until retirement. Table 4 also indicates the reduction in a representative annual pension annuity that could be paid from each worker’s account on retirement.<sup>16</sup>

<b>Table 4</b>			
<b>Superannuation Losses from Wage Freeze, Jetstar Services</b>			
<b>Classification</b>	<b>Super Lost Since 2014</b>	<b>Super Lost by Retirement</b>	<b>Annual Pension Loss</b>
GC1, 4 yr	\$1443	\$32,242	\$2379
GC3, 4 yr	\$1549	\$34,611	\$2554
GC4, 4 yr	\$1834	\$40,977	\$3024
Source: Author’s calculations as explained in text. Assumes a 35-year-old person working 38 hours per week, retiring at 65.			

The legacy of the 2014-16 wage freeze is starkly visible in the retirement savings and pension incomes of affected workers. Already, each of the simulated workers has lost \$1400-\$1800 in superannuation contributions and investment income because of the wage freeze. Those foregone superannuation losses will swell considerably over time – both because contributions remain permanently lower (by almost 5%) and because of lost investment income on those missed contributions. In turn, lower superannuation balances on retirement translate into reduced pension income for the rest of the worker’s life. A 35-year-old full-time worker could lose over \$40,000 in superannuation balances by the time of retirement (younger workers will lose even more), generating a permanent loss of pension income of thousands of dollars per year for the rest of their life.

***Conclusion: A Painful Legacy***

Employers might attempt to portray the implications of a nominal wage freeze as both modest and temporary. They are wrong on both counts. Because it locks in a permanent reduction in the wage level, and has knock-on effects on the value of future wage increases, superannuation contributions, investment income, and retirement pensions, even a temporary wage freeze (if not offset through a full catch-up wage increase, not a one-time lump-sum payment) imposes lasting costs on affected workers that can easily add to hundreds of thousands of dollars. In this regard, the 2014-16 wage freeze at Jetstar, like those imposed by many other Australian employers, cannot be brushed off as “ancient history.” To the contrary, the legacy of that wage freeze is still visible, and getting larger, with each passing year.

<sup>16</sup> The annual pension estimation assumes the same net nominal interest rate (6%) and 25-year lifespan after retirement. It is calculated as a declining balance annual annuity that is exhausted after 25 years.