The Baseline Scenario
What happened to the global economy and what we can do about it

Paper of the Year

Posted on November 1, 2009 by James Kwak | 22 Comments

As bankers' pay, at least for the fortunate ones at Goldman and JPMorgan, returns to pre-crisis heights, a paper by Thomas Philippon and Ariell Reshef is becoming everyone's favorite citation. The paper, "Wages and Human Capital in the U.S. Financial Industry: 1909-2006," got a first wave of attention from Paul Krugman, Martin Wolf, and Gillian Tett back in April (see Philippon's web page for links). It's also the subject of Justin Fox's column in *Time*; see Fox's blog for links to other discussions. (I also cited the paper in my ramblings provoked by Calvin Trillin.) The earlier references were mainly for Philippon and Reshef's finding that pay in the financial sector correlated strongly and negatively with the degree of regulation — pay was higher in both the 1920 and in the post-1980 period, and lower under the stricter regulatory system created during the Great Depression. More recent references, including Fox's column, have focused on the idea that people in finance are overpaid.

Since most articles have just focused on the headlines, I'm sure Philippon and Reshef are going to be misquoted all over the Internet. For example, at least two articles focus on a figure of "30% to 50% of financial-sector pay" in ways that are not quite correct. So I'll try to lay out what they actually say.

Section 1 (see Figures 1-3) lays out the facts. Jobs in the financial sector were more complicated and more mathematical, required more education, and were more highly paid both before 1930 and after 1980.

Section 2 asks why this happened. They regress relative education (the share of highly-educated people in the financial sector relative to the rest of the economy) and relative wage (the ratio of wages in the financial sector to wages in the rest of the economy) against several explanatory variables:

- the degree of information technology use in the financial sector
- the amount of financial innovation (represented by the number of patents)
- the amount and complexity of corporate finance activity (represented by the share of IPO activity and the amount of credit risk)
- the amount of deregulation (interstate banking, Glass-Steagall, etc.)

Not all regressions use all explanatory variables, but the results (Tables 3 and 4) are consistent: deregulation is the only explanatory variable with a strong significant effect on both relative education and relative wages. In Table 3, for example, "deregulation alone accounts for 90% of changes in education and 83% of changes in wages." Patents and IT intensity affect relative education but not relative wages; indicators of corporate finance activity affect wages but not education.

Now, none of this so far implies that people in finance are not worth their higher salaries. Deregulation could have created an environment in which the productivity differential between higher- and lower-skilled people became higher in finance than in other industries, making them more valuable in finance than elsewhere. Section 3 analyzes this issue. Figure 7 shows that, since the mid-1980s, the earnings of people in finance have shot up relative to the earnings of engineers (outside finance), even with the same level of education.

Figures 10 and 11 are based on the concept of a "benchmark" wage for finance. This is the wage that you would expect people in finance to get based solely on their relative education level (which we know went up after 1980), the skill premium (the amount that more highly-skilled people earn throughout the economy, which has also gone up since 1980), and the relative risk of unemployment (if you are more likely to be fired, you should be paid more to compensate). Figure 10 shows that given all this, you would have expected finance salaries to go up about 20% relative to the rest of the economy since 1980, but in fact they have gone up about 65%. The excess wage (Figure 11) — the difference between the amount people in finance make and the amount you would expect them to make — reached about 0.4 this decade; that means that if the average American is making $100, you might expect people in finance to make $125 (based on education, skill premium, and unemployment risk), but instead they are making $165.

The last set of regressions attempts to determine whether the excess wage in finance is due to characteristics of individuals in finance that are not observable in the previous regression. They do this by looking at the Census Bureau's Current Population Survey, which is an individual-level sample. They determine that over the entire sample period (1967-2005), even after controlling for individual characteristics, working in finance is worth a 4.4% wage premium (Table 5; 8.3% for people with post-graduate education). Looking at specific time periods (Table 6), the wage premium only appears in 1986; from 1986 through 2005 it averages 6.0%. Comparing these wage premiums to the excess wage for the industry as a whole, they conclude that 30-50% of the excess wage is *not* due to differences in ability, but represents pure rents.

Note that the wage premiums calculated here cannot be compared to the excess wage in Figure 11, because Figure 11 is estimated using industry-level data, and the estimates in Tables 5-6 use the CPS, which suffers from top-coding (incomes are reported in categories, and there are no categories for the super-rich). My interpretation is that Figure 11 is the best way to see the size of the excess wage, since it doesn't suffer from top-coding; Tables 5-6 are primarily useful for showing what proportion (30-50%, according to Philippon and Reshef) of that excess wage cannot be explained by differences between individuals.

So note in particular that the 30-50% number in the paper does not refer to the wage premium of people in finance; it is the proportion of the wage premium that cannot be otherwise explained. The excess wage itself depends on how you measure it. In Figure 11 (difference between finance wages and what finance wages would be expected to be based on education, skill premium, and unemployment risk) it gets up to 40%, but only in the last few years.

In any case, it's clear that people in finance make more than people not in finance, and that you can't explain it away just by saying they are more educated or their jobs are more risky. Now in one sense the defenders of high Wall Street pay are correct: people are probably getting roughly what they could make if they walked across the street and went to another bank. But that doesn't answer the question of whether the whole industry is making a mistake and transferring wealth to employees that should go to shareholders.

By James Kwak

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22 RESPONSES TO "PAPER OF THE YEAR"

albrt | November 1, 2009 at 8:44 pm |

"whether the whole industry is making a mistake and transferring wealth to employees that should go to shareholders"

?

I don't see anything in this post that suggests the finance industry as a whole is providing good value for money, so the rents going to employees are coming from shareholders. My baseline hypothesis (derived from just looking around) would be that both employees and shareholders in the finance industry are deriving rents from (aka "ripping off") everyone else who is not in finance.

Nemo | November 1, 2009 at 8:45 pm |

The problem is not employees versus shareholders.

The problem is the useless activities of Wall Street extracting effective rents from the productive sectors of the economy.

These firms are leeches on society. Whether their spoils go to their non-productive garbage employees or to their passive shareholders is not really the issue.

Per Kurowski | November 1, 2009 at 10:08 pm |

If you convince "risky" Joe to take out a $300.000 mortgage 30 year at 11 percent and then, if with a little help from the credit rating agencies you can convince risk-adverse Fred that this mortgage packed together with other similar is so safe he should be satisfied with a return of 6 percent, then you can sell Fred that mortgage for $510.000 and pocket a tidy an immediate profit of $210.000. In such a scenario who can be surprised by high bonuses?

Those that complain about obscene bonuses should have spoken out before but instead they stood silent in awe, believing that nonsense of the risk of the financial system being diluted in the oceans of the world or landed in the arms of those strong enough to manage them.

Anyone complaining about bonuses now, could do better questioning the validity of the low interest rates by which the Fed currently subsidizes primarily the financial sector.

Craig | November 1, 2009 at 11:54 pm |

The fact that they can control the legislators and regulators has much to do with how they set up the