

Neanderthals on Wall Street

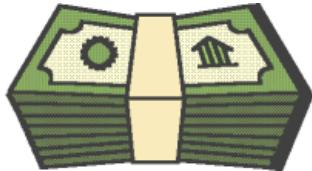
or... "How Much Does it Cost to Run a Country, Anyway?"

by

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September 30, 2008

Numbers tossed around the recent Wall Street crash and bailouts these days are in the trillions (1,000,000,000,000) of dollars. No, you can't fit that many zeros on your "Wonders of Hawaii" personal checks. But the amount itself is a wonder of mathematical creation. It is also virtually incomprehensible.

Aside from all the zeros, the real problem is that most people (i.e. those of us with less-than-six-figure-incomes) simply have no idea just how much *millions*, *billions*, and *trillions* of dollars actually represent in the "real" world. In fact, each of these numbers is respectively so much bigger than the one before, that our common terms of "lots" or "more," "lots more," and "a whole lot more" don't even come close to describing these outrageously, insanely huge amounts of money. Further, this isn't the first time that the United States is considering writing a check with eleven or twelve zeros.



The cost of the war in Afghanistan (though officially unreported by the DOD) is estimated between \$200 billion and \$500 billion and counting. The war in Iraq is calculated at \$550 billion and, of course, counting (Estimates vary because accounting reports on the War on Terror include several fronts.). The 1990s Savings & Loan bailout cost about \$160 billion. The Fannie Mae & Freddie Mac bailout is estimated at \$200 billion. The AIG bailout is scheduled for \$85 billion. The current auto industry bailout is authorized for \$25 billion. The recent Bear Stearns bailout was \$29 billion. Oh, and by the way, one sunny afternoon last week, the Federal Reserve quietly and nicely "injected" \$2 billion into mutual funds because they simply needed cash. Hey, what's a billion here or there anymore?

If Time = Money, Then Your Money = Your Time

So just what is a million, billion or trillion? Let's look at these numbers in terms of time instead of money. Since you know that time = money, then let's turn all this Wall Street money into time...your time in Paradise. Imagine swimming or grilling or riding up to the North Shore. Nice, hm? Let your mind wander. Start counting laps, or numbers of cars you pass. Count out loud if you can, 1, 2, 3...at a rate of one number per second. If you go non-stop, you can reach 1000, for example, in 16 minutes 36 seconds. That's a lot of numbers, but, hey, you get the idea of how many dollar bills that represents, right? And if you could win \$1000 counting out loud for a quarter hour, you'd probably do it.

But let's add three more zeros to get into the "-illion" numbers discussed daily in the news. Still thinking in terms of time, to count to 1,000,000 (one million), it'd take you about 11-1/2 days. Remember, that's counting out loud, 24 hours a day, every day, with no breaks for over a week and a half. "Lots" of money, hm? But countable.

Add three more zeros again, and you get 1,000,000,000 (one billion). But, you probably won't want to try this next one at home. To count to one billion, it would take you about 31 years and 8 months, non-stop, every day, all day, no breaks to eat, talk, or... anything. "A lot more" than just a million, right? We're not even at the total Wall Street bailout number yet, or the market value lost on the New York Stock Exchange in the past week.

So let's add three more zeros (and a really useful comma), so we finally get one trillion (1,000,000,000,000).

Reminder: You have only one second to pronounce each number (and I defy you to say, "nine hundred ninety-nine billion, nine-hundred-ninety-nine million, nine-hundred ninety-nine thousand, nine-hundred-ninety-nine" in one second). Even if you could, though, you'd have to teach your children, grandchildren, and hundreds of generations after them to count that high. Here's why: The non-stop counting up to a trillion will take over 31,688 years. Yup, that's "a whole lot more" time than any one of us will have here on Earth.

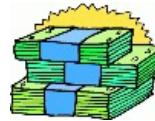
That means if you wanted to count your trillion dollars before picking up some bargains on Wall Street tomorrow, you would've had to start counting it when you were an advanced Neanderthal, over 31,000 years ago. (I'm not talking about the furry fellow in the Geico ads or any government officials recently seen on TV. I mean our really old ancestors that lived in caves and tents, hunted with spears, and could build a fire without matches.)

Seeing Money in Stacks of Bills

Still a little confused? That's ok. Let's try something else. If thinking that a trillion seconds is three millenia doesn't help you better understand this colossal number, think in terms of actual bills. You'll eventually need a whole lot of them, of course, so you better start saving – oh, but wait! We don't have a trillion extra one-dollar bills on hand right now. And even if we did, we don't have time to count them out. Hmmm. Better use thousand-dollar bills instead. No worries.

OK, now take a breath. Start with a \$1,000 bill lying around the house. Can't find one? (Hint: It's the one with President Grover Cleveland.) Still having trouble? Just get some blank checks from your checkbook. Sign them if you like; it's just as smart as leaving thousand-dollar bills around the house.

Now grab a few handfuls of the checks or bills and pile them about as high as two Big Macs on top of one other. Balance them to make a neat stack. (Easier than balancing your checkbook? Don't worry, if you overdraw, someone will bail you out someday.) Anyway, that stack represents approximately one million dollars in thousand-dollar bills. That's \$1,000,000 (and two full days' worth of calories) sitting on your plate.



But let's add three more zeros and see what happens next.

Head for downtown Honolulu and stack those thousand-dollar bills up two sides of the Aloha Tower, all the way up the flagpole. Good job. Now you're looking at about \$1,000,000,000 (one billion dollars). "A lot more" than a couple burgers, hm? Starting to see just a billion? Remember the country deals in hundreds of billions all the time, though, so that would mean hundreds of billion-dollar Aloha Towers. That a lot of aloha, yah?

Take a minute now to try and predict how high you'd have to stack your thousand-dollar bills to total \$1,000,000,000,000 (one trillion dollars). I'll wait while you think.

Well, this last whole stack of bills is going to be harder to see, partly because it's going to have to be built after sunset. Look up into our starry night sky and find the brightest little white light *that moves*. (No stars, planets, or military aircraft.) Watch as the light advances from horizon to horizon in 4 or 5 minutes (That little speck is actually traveling 17,500 miles per hour, but don't worry about speeding tickets just now.). Nope, it's not a bird. It's not a plane. It's the International Space Station orbiting about a hundred miles above the Earth.

But why are we star-gazing in the midst of this article? It's because you need to stack your bills up to the Space Station to get \$1,000,000,000,000 (one trillion dollars). For those of you who tried instead to use one-dollar bills (umm, you may be at this for a long time), you'll need to stack them halfway to the moon. But please *don't*—at least, not until we talk about how far away it is! For now, you've got a stack of thousand-dollar bills that reaches above the atmosphere and into space.

So now you're also in a much better position to figure out Wall Street. Well, maybe we still don't get all the economics of it, but we can at least start to understand how much money is floating around out there, and how much it takes to run a country. Why bother? Because it's our responsibility to

understand. Let's just be thankful that we don't have to get a quadrillion of anything, hm?
At least, not yet.

REFERENCES

Ways to understand really big numbers

- <http://illuminations.nctm.org/LessonDetail.aspx?ID=L367>
- <http://answers.yahoo.com/question/index?qid=20080128050552AAFUL18>
- <http://answers.yahoo.com/question/index?qid=20061015210641AATOPsx>
- <http://apesmaslament.blogspot.com/2008/09/how-much-is-1000000000000-anyway.html>

Federal costs

- <http://www.npr.org/templates/story/story.php?storyId=94699063>
- http://news.yahoo.com/s/nm/20080923/ts_nm/us_financial_news
- <http://zfacts.com/p/447.html>
- <http://www.slate.com/id/2199560/>
- <http://fskrealityguide.blogspot.com/2008/04/how-much-did-bear-stearns-bailout-cost.html>

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Radnofsky, M. (9/30/2008) *Neanderthals on Wall Street... or How Much Does it Cost to Run a Country Anyway?*
<http://socratesinstitute.org/research/NeanderthalsMLR.htm>. The Socrates Institute.