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401(k) Discrimination Testing and Peanut Butter and Jelly Sandwiches



By DAVID R. GODOFSKY

Tax code Section 401(k) discrimination testing, when done well, is like making a peanut butter and jelly sandwich. Using the PB&J techniques outlined below, one can achieve a better-tasting product, in the form of improved contribution limits, reduced (or no) refunds to highly compensated employees, and less expensive corrective contributions for non-highly compensated employees. Before getting into the artistry of PB&J testing, however, it may be helpful to cover a few technical points.

With certain exceptions, 401(k) plans are required to pass three tests to ensure that they do not impermissibly “discriminate”¹ in favor of highly compensated employees (“HCEs”).² The first test is a “coverage test” based on a simple head count of HCEs and non-highly compensated employees (“NHCEs”) who are eligible to

¹ The term “discriminate” is used here in its technical meaning, which of course bears no relation to its common sense meaning. A 401(k) plan is said to “discriminate” when highly compensated employees, on average, elect to contribute a greater percentage of pay than non-highly compensated employees elect to contribute, and the difference exceeds the allowable amount.

² An HCE, generally, is an employee who earned more than \$110,000 in the prior calendar year. This amount is indexed to inflation and will increase to \$115,000 in 2013.

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participate. In short, the percentage of NHCEs among this eligible group must bear a certain relationship to the percentage of NHCEs in the company’s population as a whole. The coverage test plays an important role in achieving the tastiest product, and is discussed in greater detail below.

The second test is the average deferral percentage (“ADP”)³ test, which takes the average of the employee pretax contribution percentages for HCEs and compares that to the average for NHCEs. For example, if you have two HCEs who contribute 5 percent and 7 percent, then the average for HCEs is 6 percent. For most companies, the HCE average cannot be more than 2 percent higher than the NHCE average.⁴ For example, if the NHCE average is 4 percent, the HCE average cannot be more than 6 percent. In computing these averages, zeros count. So, if you had two NHCEs and one contributed 8 percent while the other contributed nothing, the average would be 4 percent.

The third test is the average contribution percentage (“ACP”) test, which is the same as the ADP test except that it focuses on matching contributions plus employee after-tax contributions, rather than 401(k) deferrals.⁵

Employer contributions that are not a “match”—that is, that are given even if the employee does not contribute—are not subject to either the ADP or the ACP test. Rather, these contributions (sometimes referred to as “profit sharing” or “nonelective” contributions) are subject to a much more complex testing regime that is beyond the scope of this article. However, one type of nonelective contribution, the **qualified** nonelective contribution (or “QNEC”)⁶ can be used in ei-

³ The statute refers to the “actual deferral percentage” but the test is more commonly referred to as the “average deferral percentage” test. “Average” is also more descriptive of the test than “actual.”

⁴ The allowable discrepancy depends on the ADP for NHCEs. If the ADP for NHCEs is less than 2 percent, the ADP for HCEs can be twice as much. Between 2 percent and 8 percent, the ADP for HCEs can be 2 percent more. And if the NHCEs have an ADP of more than 8 percent, the HCEs can have an ADP that is 1.25 times the ADP for NHCEs. The same rules apply to the ACP test described below.

⁵ Roth contributions, although after-tax, are included in the ADP test rather than the ACP test. The ACP test includes traditional after-tax contributions and matching contributions.

⁶ A qualified nonelective contribution is fully vested at the time it is contributed, and cannot be distributed to the employee until termination of employment or age 59½, whichever comes first.

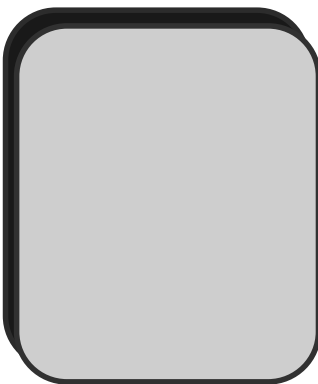
ther the ADP test or the ACP test at the employer’s option. QNECs are often used to pass the ADP or ACP test.

Peanut Butter & Jelly Method (‘PB&J’)

Below we have two pieces of bread, one has peanut butter on it, the other has jelly. Separately, they are not particularly appealing.



Put them together, however, and you get a delicious lunch.



Averages can be a tricky business. Consider the following two operating units of ISAR Services Inc.

	Information Systems (“Jelly”)	Automotive Repair (“Peanut Butter”)
Highly Compensated Employees (“HCEs”)	800	200
Average Deferral Percent for HCEs	5%	10%
Non-highly Compensated Employees (“NHCEs”)	2,500	7,500
Average Deferral Percent for NHCEs	1%	5%

As you can see, this company, with two operating units and two 401(k) plans, badly fails the ADP test in both plans. The IS division is populated by young but highly paid employees who tend not to think much about retirement or saving money. The disparity between the averages for HCEs and NHCEs is 4 percent—much more than permitted. The Automotive Repair division is populated by highly paid middle-age employees who are worried about retirement and save a lot. However, only a few managers in automotive repair break through the magic \$110,000 barrier to become HCEs. Generally, the repairmen earn \$60,000 to

\$80,000. Even so, the disparity between HCEs and NHCEs is 5 percent—again, much more than is permitted.

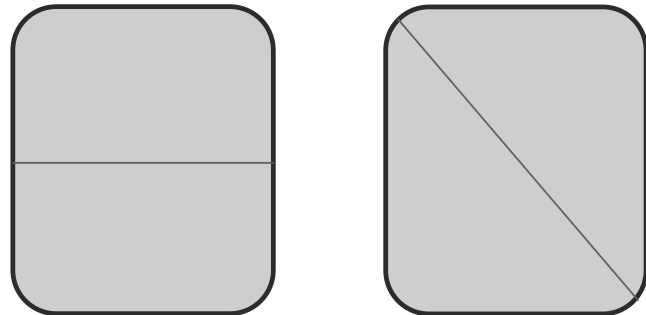
Now, let’s put these two groups together.

	Information Systems (“Jelly”)	Automotive Repair (“Peanut Butter”)	Sandwich
Highly Compensated Employees (“HCEs”)	800	200	1,000
Average Deferral Percent for HCEs	5%	10%	6%
Non-highly Compensated Employees (“NHCEs”)	2,500	7,500	10,000
Average Deferral Percent for NHCEs	1%	5%	4%

The Sandwich Plan has a disparity of just 2 percent and now passes the ADP test, while the two individual plans both fail. When you put all the HCEs together, the more numerous IS employees drag the average all the way down to 6 percent. When you put the NHCEs together, the more numerous Repairmen drag the average all the way up to 4 percent. *Voila!* The Sandwich Plan is yummy!

Now I know what you’re thinking. Metaphors are great but they take you only so far. At some point, we’re going to have to stop talking about PB&J and just get into the dull math stuff. Well, you’re not even close. Our 401(k) practice still has much more to learn from PB&Js.

Every parent knows that a critical part of making a PB&J is how you cut it. Some kids like theirs cut into two rectangles, while other kids prefer two triangles. Give your kid the wrong type, and it just won’t work.



ISAR now has a new 401(k) testing problem. Earlier, ISAR had limited HCEs to contributing no more than 12 percent of pay into the respective 401(k) plans. After ISAR solved its 401(k) testing problem by combining the IS plan with the AR plan, ISAR’s highly compensated employees demanded to be able to contribute the full \$16,500 into the new sandwich 401(k) plan, regardless of what percent of pay that was. Consequently, the HCEs increased their average contribution from 6 percent to 7 percent. Once again, ISAR is facing a testing failure.

This test failure is unacceptable to ISAR. In order to close the gap, ISAR has two choices: (1) refund contributions to approximately 300 highly compensated employees, including all of its senior management team; or (2) pay QNECs for NHCEs in the amount of \$5.5 million. Facing the prospect of imminent unemployment upon presenting these two options to senior management, ISAR’s vice president of benefits is desperately seeking a third option.

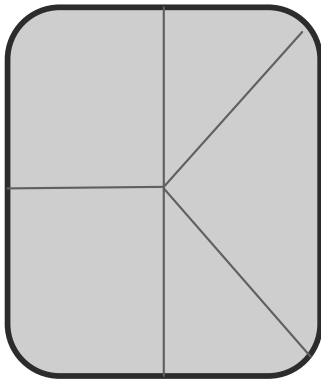
After much study ISAR's vice president of benefits decides to slice the company's 401(k) plan into two rectangles, as follows:

	Sandwich	Salaried	Hourly
Highly Compensated Employees ("HCEs")	1,000	980	20
Average Deferral Percent for HCEs	7%	6.98%	8%
Non-highly Compensated Employees ("NHCEs")	10,000	6,000	4,000
Average Deferral Percent for NHCEs	4%	5.33%	2%

Now, ISAR again has two 401(k) plans, and one of them is failing. The Salaried Plan, which has the bulk of the HCEs, has a discrepancy of 1.65 percent and easily passes. The Hourly Plan has a discrepancy of 6 percent and fails. However, the Hourly Plan only has 20 HCEs, so at worst, the consequence of failing is that it will have to refund contributions to 20 hourly (but highly paid) employees. In practice, the number of employees getting refunds will be less than the full 20—probably more like 10. As a result, ISAR's vice president of benefits is no longer facing the prospect of unemployment.

Different Ways to Cut

When my son was little, he used to like his PB&J sandwiches cut into two rectangles, and then have one rectangle cut again into squares, with the other rectangle cut in to three triangles, as shown.



The primary advantage of this arrangement, of course, was that it drove his mother nuts. As a secondary advantage, it also provides instruction about 401(k) testing.

The lesson of the numbers above is not that all 401(k) plans can be improved by being divided into salaried and hourly—that depends on the demographics of the company. The actual lesson is that sometimes dividing the plan into multiple plans can improve the testing results. The division could be hourly/salaried, or exempt/nonexempt, or it could be by location or by business unit, or by line of business, or by employee classification. Most law firms have one plan for partners and another plan for associates. I have one client that divided its plan into five parts (by line of business) and reduced its cost of QNECs by hundreds of thousands of dollars.

There are certain divisions that can be accomplished within a single plan, and others that require the plan literally be split into multiple plans, each with its own trust fund and Form 5500. For example, if you have several "qualified separate lines of business," by filing a

Form 5310-A with the IRS you can divide the plan for testing purposes, even though the plan is not literally divided into parts. This is known as "disaggregation." You can also disaggregate employees with less than one year of service, and employees who are under age 21 (also known as "excludable employees"), from the remainder of the plan's population. In fact, most plans will get a better result by disaggregating the excludable employees.

You are required to disaggregate employees covered by a collective bargaining agreement. If you have multiple collective bargaining units, you can test them separately from one another, or "aggregate" them in any combination, but you can never test the collectively bargained employees with the nonunion employees.

You can also aggregate plans, and this technique is very helpful. For example, back when ISAR had one plan for Information Systems and another for Automotive Repair, it was permitted to aggregate the two plans for testing purposes, even though the two plans were physically separate.

In theory, the ideal split is to have a different 401(k) plan for each employee. ISAR Inc. would have 11,000 plans. Then, the plans could be aggregated in a variety of ways, with the employer picking the aggregations that work best. However, as a practical matter, this won't work. No company could afford to administer so many separate plans. Ideal discrimination testing techniques require a balancing between the results that work best mathematically and the types of splits that can be accomplished with a minimum of administrative cost and effort.

New Ingredients—Banana Slices and Honey

Several additional ingredients are needed in order to complete the menu. The first of these ingredients is **targeted qualified nonelective contributions**, or **targeted QNECs**. Many practitioners incorrectly believe that the targeted variety of QNECs was eliminated by regulations several years ago. Actually, targeted QNECs were sharply curtailed, but even the reduced amount of targeting now available can be potent. To understand how targeted QNECs work, we have to go back to ISAR's vice president of benefits and the \$5.5 million in QNECs she was worried about. At that point (before dividing the plan into salaried and hourly plans) the combined plan was failing the test by a full percentage point. The disparity between HCEs and NHCEs was 3 percent, and the maximum allowable is 2 percent. To increase the average for NHCEs, it would have been necessary to give a qualified nonelective contribution, or QNEC, of 1 percent of compensation to each of the 10,000 NHCEs. At an average compensation of \$55,000, that works out to \$550 per person for 10,000 employees, or \$5.5 million.

Now, instead of giving a 1 percent QNEC to each of 10,000 employees, you can get the same impact on the average by giving a 5 percent QNEC to each of 2,000.⁷ Suppose ISAR's plan specifies that QNECs are to be given only to NHCEs who have earned less than \$10,000. It would pick up 2,000 NHCEs and the average

⁷ In general, targeted QNECs are limited to 5 percent of compensation. QNECs in excess of 5 percent can be given, but they generally do not count in the ADP test or the ACP test. However, there is an exception to this rule, described below (see "potato chips").

compensation of those 10,000 employees is only \$4,000. So, the QNEC now costs \$400,000. It is still a lot of money, but it's a lot better than \$5.5 million.

"Wait!" you say. How could you have 2,000 employees who earn less than \$10,000? ISAR has a highly skilled, highly paid workforce. However, ISAR also has high turnover, as well as many employees who work part-time. Some employees earn very little each year simply because they terminate at some point in the year, and their compensation does not reflect a full 12 months. Others may happen not to work many hours in a given year. And some fall into both categories (part-time for part of a year). The test is not done on the basis of full-time equivalents (or FTEs). In the test, each employee counts as 1, regardless of how few hours he works.

The next ingredient to add is "**Borrowing.**" Before we get into borrowing, we need to go over the ACP test and qualified matching contributions, or "QMACs."⁸

ISAR provides a qualified match to the employees who contribute to the 401(k) plan. The match is "dollar for dollar" on the first 3 percent that the employee contributes. The highly compensated employees, who contribute more, have an average contribution percentage of match (or "ACP") equal to 2 percent. The NHCEs, many of whom don't contribute at all, have an ACP of .9 percent. This result (2 percent and .9 percent) fails the ACP test. You might think that also failing the ACP test, on top of failing the ADP test, would be a bad thing. Because of borrowing, however, it turns out to work for ISAR.

Let's go back to the Sandwich Plan before ISAR was able to slice it into rectangles. Remember that ISAR was able to reduce the QNEC from \$5.5 million down to \$400,000 by using a targeted QNEC. **However, we are now going to reduce the QNEC to \$10,000 by using borrowing.** With borrowing, ISAR can reduce the QNEC to only employees who earned less than \$2,000 during the year. It turns out there are 200 of those employees, with average earnings of \$1,000. The 5 percent QNEC for these employees is going to cost \$10,000 and is going to add 0.1 percent to the ADP of the NHCEs. However, that 0.1 percent will be enough.

This is what our test looks like with the 0.1 percent QNEC but before borrowing.

	Sandwich
Average Deferral Percent for HCEs	7%
Average Deferral Percent for NHCEs (including QNEC)	4.1%
Average Contribution Percentage for HCEs	2%
Average Contribution Percentage for NHCEs	0.9%

ISAR fails the ADP test because the disparity is more than 2 percent (7 percent minus 4.1 percent is 2.9 percent). It fails the ACP test because 2 percent is more than two times 0.9 percent.

So, we are going to "borrow" 0.9 percent from the ACP for NHCEs, and use it in the ADP. We can do this because the match is a qualified match, and can be used in either test. Our test now looks like this.

⁸ Qualified matching contributions are similar to qualified nonelective contributions in that they are fully vested when contributed and are not distributable until termination of employment or age 59½. Also, they can be used either in the ADP test or in the ACP test, at the plan administrator's election.

First Borrowing	Sandwich
Average Deferral Percent for HCEs	7%
Average Deferral Percent for NHCEs	5%
Average Contribution Percentage for HCEs	2%
Average Contribution Percentage for NHCEs	0%

As you can see, we now pass the ADP test (with a disparity of 2 percent) but fail the ACP test miserably. We are now going to "borrow" again. You are allowed to shift money from the ADP test to the ACP test if you satisfy two conditions. First, you have to pass the ADP test before shifting. Second, you have to pass *both* the ADP and the ACP test after the shift. So, ISAR is going to shift 2 percent from the ADP to the ACP for both HCEs and NHCEs. Here is how the test looks after the second borrowing or shifting.

Second Borrowing	Sandwich
Average Deferral Percent for HCEs (minus 2%)	5%
Average Deferral Percent for NHCEs (minus 2%)	3%
Average Contribution Percentage for HCEs (plus 2%)	4%
Average Contribution Percentage for NHCEs (plus 2%)	2%

ISAR now passes both tests!

To recap: ISAR started out with a disaster. It had a choice between giving refunds to 300 highly compensated employees, or contributing \$5.5 million. For future years, it solved the problem by slicing the plan into a salaried and hourly plan. But for the first year, when it was too late to slice, it reduced the \$5.5 million QNEC, first to \$400,000 by using a targeted QNEC, and then down to \$10,000 by also using borrowing.

Add Potato Chips

It seems highly counter-intuitive, but many people find that adding potato chips in their PB&J sandwiches⁹ gives them a pleasing crunchy texture and perfectly complements the already-salty peanut butter. Similarly, there are times that a targeted QNEC is enhanced by the slightly crunchy texture you get when you vary the QNEC percentage from one employee to another. This technique is most likely to work when the additional percentage needed to pass the ADP test or ACP is more than 1.25 percent. The greater the percentage needed, the more likely you are to want to add potato chips.

In general, QNECs of more than 5 percent are not counted in the ADP or ACP tests. However, if the median NHCE has a percentage of more than 2.5 percent, then you can use a QNEC of two times the percentage of the median NHCE. The median NHCE is the one who has a higher contribution percentage than half of the NHCEs. So, in the case of ISAR, that would be the 5,000th NHCE when you rank them by contribution percentage. Let's say that ISAR needed a QNEC that added 2 percent to the ADP of NHCEs. It could do that by giving a 5 percent QNEC to each of 4,000 employees. However, it *might* find that it is more cost effective to give a QNEC of 6 percent to each of 1,667 employees, plus a QNEC of 3 percent to 3,333 more employees. The result would be the same 2 percent in the ADP test, but depending on the crunchiness of the salary distribution, it could cost substantially less than the smooth 5 percent QNEC.

There is a mathematical algorithm for determining the optimal distribution of QNECs. The answer will usu-

⁹ The chips go *between* the peanut butter and the jelly.

ally turn out to be X percent for some number of NHCEs, and 2X percent for other NHCEs. Determining what “X” is and how many NHCEs get each amount is easy if you use the algorithm.¹⁰

Back to Coverage Testing

When ISAR split the Sandwich Plan into an Hourly Plan and a Salaried Plan, each of the Plans was required to pass a “coverage” test in tax code Section 410(b). The coverage test starts with the “ratio percentage test.” This test takes the percentage of NHCEs covered by the plan and divides it by the percentage of HCEs in the plan. The resulting ratio must be at least 70 percent. The Hourly Plan passes the ratio percentage test, but here is how it works for the Salaried Plan.

Ratio Percentage = $(6,000 \div 10,000) \div (980 \div 1,000) = 60\% \div 98\% = 61.2\%$

Because 61.2 percent is less than 70 percent, the Salaried Plan fails the ratio percentage test. In order to pass the coverage test, the Salaried Plan must now pass something called the “average benefit percentage” test, or “ABP” test.

The ABP test has three components. First, the split itself must involve reasonable classifications of employees. (Red hair would probably not work, but hourly and salaried definitely work.) Second, the ratio percentage must pass a relaxed test. For ISAR, the minimum required ratio percentage would be somewhere between 20 percent and 27.5 percent. Because the ratio percentage is 61.2 percent, it easily passes this second component.

The third component of the ABP test involves the “average benefit percentage” for highly compensated employees and for non-highly compensated employees. In short, the ABP for NHCEs must be at least 70 percent of the ABP for HCEs. This calculation is done counting both the Salaried Plan and the Hourly Plan—in other words, this component of the test is a companywide test, not limited to one plan. In the case of ISAR, it has

¹⁰ The algorithm is easy to use, but it is not short, and therefore it is beyond the scope of this article.

discovered that the ABP for NHCEs is only 65 percent of the ABP for HCEs.

Does this mean that ISAR cannot slice its Sandwich Plan in two? Not at all. It means that in order to slice the plan, it has to add some benefits for NHCEs. Here’s where targeted QNECs come in again.

You will recall that QNECs in excess of 5 percent cannot be used in the ADP test. However, this limitation does not apply to the ABP test. So, ISAR discovers that the cheapest way to increase the ABP for NHCEs is to give a QNEC of 100 percent of pay to a small select group of very low-paid NHCEs. Like the ADP test, the ABP test averages percentages with each employee counting as one. So, if you have an employee who earned \$500, a \$500 QNEC for that employee will have as much impact as a \$550 QNEC to each of 100 employees who earn an average of \$55,000. Thus, a targeted QNEC may cost \$500 where a normal QNEC would cost \$55,000. In short, ISAR has a very inexpensive way to raise its average benefit percentage result to 70 percent.

Conclusion

401(k) testing is both an art and a science and, as this article demonstrates, simple steps can produce tremendous cost savings and other improvements.

This article does not cover many of the techniques and requirements of 401(k) testing. For example, *not covered* are (1) the uses and requirements for qualified separate lines of business; (2) the best way to determine whether to separate excludable employees and which ones to test separately; (3) safe harbor contributions; (4) structuring the match to achieve the best testing result; (5) how to use catch-up contributions and Roth 401(k) contributions; (6) the various options for determining benefit percentages in coverage testing; (7) figuring out which plans to aggregate if you have many plans; (8) uses of and requirements for non-qualified plans; and (9) techniques for boosting participation among non-highly compensated employees. However, this article hopefully provides food for thought with respect to potential solutions to 401(k) testing problems and opportunities, and will assist the plan sponsor in asking the right questions to lead to the best solutions.