

Taking (Some of) The Mystery Out of The CFP Certification Examination

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The scoring process used in the CFP Certification Examination and the subsequent results reported to candidates are often confusing and provide little information as to how the exam is graded. Even those teaching in the financial planning educational programs across the country don't have a good understanding of the "modified Angoff" procedure and are able to provide little help by way of explanation to their students. This article gives candidates and instructors some insight into the process.

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Many professional exams have clear pass/fail standards. For example, the passing score for the CPA exam traditionally has been 75 percent and the student's score was subsequently reported directly to him or to her via mail.¹ Similarly, the National Association of Securities Dealers' (NASD) exams have standard pass/fail scores and the candidate can determine pass/fail status immediately upon completing the examination simply by requesting his or her score on the computer. By contrast, the Certified Financial Planner Board of Standards Inc., located in Denver, Colorado, does not publish a passing score percentage for the CFP Certification Examination, nor does it report to the candidate his or her test score as a percentage. The practice of not reporting scores results in confusion and frustration for the unsuccessful candidate for certification. Candidates failing the exam are given a printout of numbers that correspond to their weak areas as defined by the CFP Board's topic list of job knowledge requirements (see the CFP Board's *Guide to CFP™ Certification*).² Successful candidates are given a congratulatory slip of paper with no indication as to how well they did.

Not only are the candidates confused, but many who work in the 203 educational programs at 136 universities across the country share similar feelings. Both the program directors and instructors at CFP Board-registered programs are often quite bewildered as candidates return from the exam and receive score reports that give little information.

Program directors from across the nation meet in Denver each August for two days to be brought up to date on new issues facing the CFP Board and the financial planning profession in general. A good bit of discussion is generally given to the examination process—often perceived as mysterious—and to why our students are often unsuccessful in passing. The response from officials at the CFP Board is that the exam is scored using a modified Angoff method and this precludes the setting of an absolute cutoff, or passing score, such as 75 percent. In fact, the modified Angoff method may require changing the cutoff score from one test to the next depending on the particular mix of questions and the particular group of candidates. (A brief informal survey of program directors shows that approximately one in five understands the modified Angoff procedure for setting a passing score.) Generally, after some discussion along these lines, the eyes of the program directors begin to glaze over—much like the proverbial deer in the headlights—and we reluctantly accept the fact that the mechanics of the scoring process are beyond our grasp. We then travel back to our instructors and students who are eagerly awaiting our return as we have promised them that this time we would make headway on gaining a better understanding of the examination development and scoring. But as we begin to repeat the information we heard—as if we expect them to understand—the glazed look appears in their eyes...and so the story goes.

In an effort to dispel some of the mystery, I will attempt to present the methodology regarding the modified Angoff method of establishing a passing score and, in particular, how it relates to the CFP Board's exam.

Beginning in 1992, the CFP Board instituted a comprehensive ten-hour examination for candidates seeking certification. Prior to this, candidates completed a series of six separate subject examinations in order to complete the educational component of the CFP certification. The move to the comprehensive examination was justified based on the integrated nature of the financial planning process. Comprehensive financial planning requires the planner to evaluate the areas of investments, tax, insurance, retirement and estate planning simultaneously as he or she makes recommendations.

By some estimates, roughly 350,000 people in the United States call themselves financial planners. Of these, only 38,000 are CFP certificants. Approximately 5,000 candidates a year take the exam and the first-time pass rate averages 62 percent. An understanding of the modified Angoff method of establishing a cut score may benefit future candidates seeking certification as well as those who work in the financial planning educational process.

Modified Angoff

The modified Angoff method of establishing a passing score is designed to help determine whether a professional entering a particular field has the minimum level of competency necessary to practice in that field. This minimum level of competency is necessary to protect the public from harm by practitioners holding themselves out to be certified professionals. The Angoff methodology avoids the setting of an arbitrary relative minimum passing score as many professional exams have traditionally used.

The modified Angoff method uses a panel of experts to evaluate questions included in a test bank. At the CFP Board, this panel is referred to as the Pass Score Committee. The Pass Score Committee is a diverse group of practitioners and academics, all of whom are CFP certificants. Their job is to review and agree on a standard of what a beginning financial planner would need to know at a minimum level of competence to obtain the CFP certification. A minimum level of competence means that a person is able to practice comprehensive financial planning without supervision. The committee uses this standard to assign a likelihood of a beginning minimally acceptable CFP practitioner being able to answer a particular question correctly. Stated another way, they answer the question: "What percent of beginning minimally competent CFP practitioners would know the answer to a particular question?"³ The process involves two aspects: (1) the standard of the knowledge requirements considered to be minimal for a CFP certificant to practice without supervision and (2) a rating that relates that standard to each item in the test.

Some Example Questions

To illustrate the modified Angoff process, consider the following questions released by the CFP Board from the test bank in January 1999.⁴

What is the early withdrawal penalty for a SIMPLE plan during the two-year period beginning on the date the employee first participated in the plan?

- A. 10 percent
- B. 15 percent
- C. 20 percent
- D. 25 percent

Most practicing financial planners would recognize this as a basic question regarding the characteristics of a SIMPLE plan. If a financial planner knew only a few facts about the basics of SIMPLE plans, this would likely be one of them. The members of the Pass Score Committee might conclude that, on average, 85 percent of minimally competent CFP practitioners would know this fact and be able to advise clients accordingly.⁵ Thus, this question might be assigned an Angoff rating of 0.85 when calculated into the minimum passing score.

Now consider the following question regarding estate planning, also released by the CFP Board in January 1999:

Mrs. Bailey dies, leaving her entire \$3.2 million estate to her penniless husband, Mr. Bailey. Their estate goes to their children at his death. He has terminal cancer with a life expectancy of one to two years. The alternative valuation date computes Mrs. Bailey's entire estate equal to \$3 million. Select the post mortem technique he should utilize to reduce the overall estate tax liability of both estates.

- A. Elect to use date-of-death valuation
- B. Elect to use alternate valuation date
- C. Disclaim \$625,000 and elect to use the alternate valuation method
- D. Disclaim \$1,500,000 and elect to use the alternate valuation method
- E. Disclaim \$3,000,000 and elect to use the alternate valuation method

This question requires considerably more evaluation than the previous question. Selection A is an obvious throwaway. However, the other four responses are all potential solutions. Most candidates would quickly recognize that the alternate valuation date could be used in this situation. The question of using a disclaimer arises for options C, D and E, requiring additional analysis. If a disclaimer is appropriate, what is the proper amount for Mr. Bailey to disclaim? A number of candidates would recognize that option C, the \$625,000 (the exclusion amount in 1998) would avoid wasting Mrs. Bailey's unified credit. However, disclaiming \$1.5 million would use Mrs. Bailey's exclusion amount plus equalize the estate, an important consideration given the facts of Mr. Bailey's short life expectancy and the progressive nature of the tax tables. This question requires the candidate to bring together a number of factors to arrive at the correct solution of minimizing the tax liability of both estates. The collective judgment of the Pass Score Committee might be that only 30 percent of minimally competent practicing CFP certificants would correctly arrive at this conclusion. Thus, this question would be assigned an Angoff rating of 0.30.⁶

In compiling the test, the CFP Board's independent exam administrator, the Chauncey Group International, selects approximately 285 questions to be included on each examination according to a table of content specifications. This includes a total of from 45 to 55 questions attached to three separate major cases, with the balance of the questions being stand-alone multiple choice, matching, or three- to four-question item sets. Questions are given additional weight if they are attached to a major case as opposed to being stand-alone. Stand-alone questions, such as the two examples given above, are weighted at two points each. Case questions are weighted at three points each. A stand-alone question with an Angoff rating of 0.7 would add into the raw cut score at 1.4 total points (0.7 x 2 points), whereas a case question with the same probability would add in at 2.1 points (0.7 x 3 points).

A hypothetical example of calculating the minimum passing score for an examination is given in Table 1. For the particular mix of questions listed, the candidate would have to score a minimum of 401.20 points in some combination of stand-alone and case questions. Note that the total possible points on the exam is calculated as:

Stand-alone questions:

234 @ 2 points each 468

Case questions:

51 @ 3 points each 153

Total possible points 621

From this example, the candidate may conclude that the pass score in percentage terms is 64.6 percent (401.20/621); that is, approximately 184 questions of the 285 need to be answered correctly. It is incorrect to make such an inference. The candidate could achieve the necessary cut score by answering as few as 175 questions if he or she got all the case questions correct. On the other hand, a passing score would take 201 stand-alone questions answered correctly if none of the case questions was answered correctly. Note that this is a hypothetical cut score for this particular group of questions. If the mix shifted to more difficult questions, the cut score would drop because of more low Angoff ratings. Conversely, if the mix shifted to easier questions (more high Angoff ratings), the cut score would rise. Thus, it is somewhat meaningless to talk about a raw percentage score when using Angoff. This explains why candidates' scores are not reported; such reporting would likely only increase the confusion level. The important point is that a standard of what is minimally required to gain the CFP certification is used to establish the passing score.

TABLE 1

CFP Certification Examination—Calculation of Minimum Passing Score

Hypothetical Example

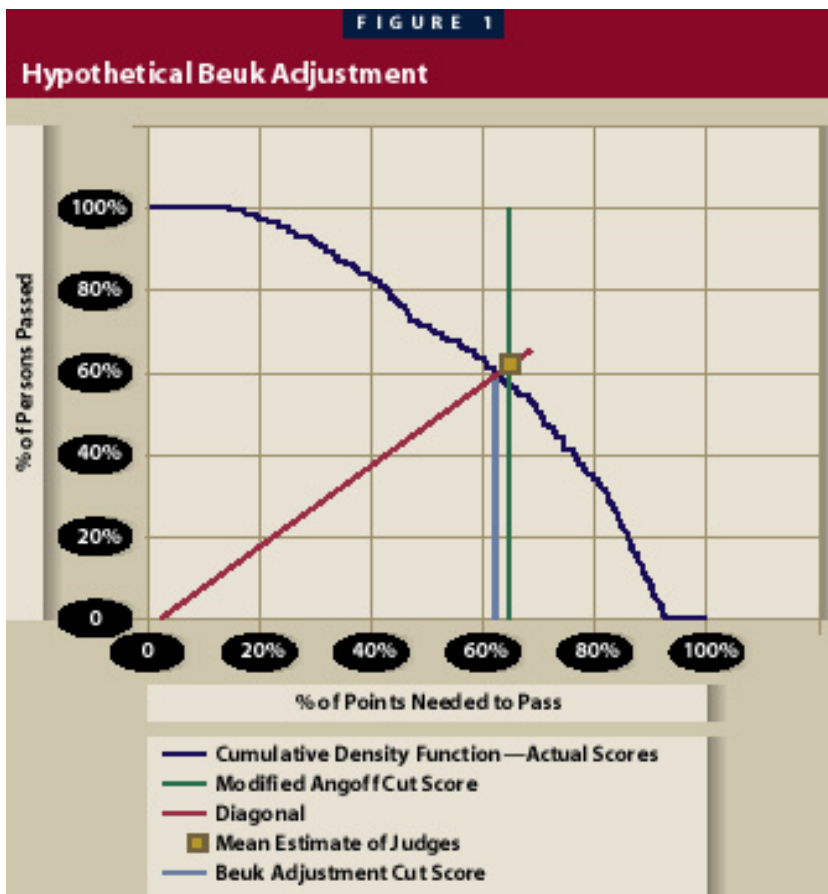
Stand-Alone Questions (2 points each)			
	Number of Questions	Angoff Rating	Total
	9	.20	3.60
	12	.30	7.20
	15	.40	12.00
	21	.45	18.90
	23	.50	23.00
	24	.60	28.80
	17	.65	22.10
	21	.70	29.40
	24	.75	36.00
	23	.80	36.80
	20	.85	34.00
	25	.90	45.00
Sub-total	234		296.80
Case Questions (3 points each)			
	Number of Questions	Angoff Rating	Total
	2	.30	1.80
	3	.40	3.60
	4	.50	6.00
	8	.60	14.40
	6	.65	11.70
	6	.70	12.60
	5	.75	11.25
	6	.80	14.40
	7	.85	17.85
	4	.90	10.80
Sub-total	51		104.40
Total	285		401.20

The Decision of the Board of Examiners

The CFP Board’s Pass Score Committee is not the final word on what the passing score is. In fact, the Pass Score Committee only makes a recommendation to the CFP Board as to what the passing score should be given the standard of what a beginning minimally qualified CFP certificant needs to know. It is the CFP Board’s Board of Examiners that makes the final decision as to what the cut score is by considering a variety of options and adjustments. One of those adjustments is the Beuk compromise adjustment.⁷

The Beuk adjustment involves comparing what the CFP Board’s Pass Score Committee thought would happen for an exam to what actually did happen. The committee members are asked individually to make one additional estimate:

the percent of candidates that should pass this exam. The red diagonal in Figure 1 represents committee members' estimates of cut scores versus candidate pass rates; with the yellow box on the diagonal representing the mean value of those estimates. The vertical green line represents the modified Angoff cut score developed in Table 1 (64.6 percent). The vertical blue line represents the modified Angoff cut score developed in Table 1 (64.6 percent). The curved dark blue plot shows the percentage of candidates attaining each percentage score from low to high (that is, the empirical test results). If there is a discrepancy between the actual results and the expected results, the pass score may be adjusted downward or upward. In this example, the pass score may be adjusted downward from 64.6 percent to 62 percent on the percent of items answered correctly to pass. Note that this is the intersection of the red diagonal (judge's estimates) with the dark blue plot (empirical testing results). The adjustment allows for the fact that judges' estimates may differ significantly from actual results and some compromise may be necessary. It should be emphasized that these scores are examples only and not representative of actual CFP exam results or conditions.



Maintaining Consistency: Examination Equating

After selecting the passing score, a process is needed to continue the same standard on subsequent CFP test administrations.

Two variables that must be considered in repeated administrations of an examination are candidate preparedness and the difficulty level of the test. Both are likely to vary from exam to exam. The level of candidate preparedness may vary with some groups being better prepared than others. In addition, exam difficulty may vary from test to test depending on the mix of questions. There needs to be some mechanism that allows for these variations from test to test, with the overall goal being that a candidate passing the examination today has met the same level of minimum required proficiency as the candidate of two years ago or five years ago. The method used to ensure this level of consistency is referred to as examination equating. Examination equating refers to the process whereby a mini-exam is embedded within the overall exam.⁸ This mini-exam contains questions used on previous exams, located at the identical place in the current exam as in previous exams. These mini-exam questions are scored and compared with

previous exams. Since the questions are common to previous exams, variations in the mini-exam scores are likely due to the first variable, the level of candidate preparedness.

Table 2 illustrates when adjustments to the cut score may be necessary for a particular examination. Consider first the case of a score on the embedded questions that has a performance equal to that of the prior tests in which those questions appeared and a score on the total exam that appears higher than that of past examinations. The equal performance on embedded questions (the mini-exam) indicates the candidate population is equal in preparation to previous groups. But the higher-level performance on the total exam indicates the overall new examination form is somewhat easier. Thus, the cut score would be adjusted upward to account for the decreased level of difficulty of the overall exam.

		Total Exam Score		
		Higher Performance	Normal Performance	Lower Performance
Embedded Questions Score	Higher Performance	None	Down	Down
	Normal Performance	Up	None	Down
	Lower Performance	Up	Up	None

Next, consider the case of a score indicating higher performance on the embedded questions but a lower score on the total examination compared with past performances. This indicates an above-average group of candidates in terms of preparedness but an overall examination that is somewhat more difficult. The result is that the cut score for this test would be adjusted downward. This score equating process permits the same minimum knowledge requirements standard to be applied to all candidates regardless of the difficulty of the particular CFP test the candidate was administered.

Summary

The purpose of this paper was to shed light on the passing-score process used in the CFP exam. The modified Angoff method of establishing a passing score avoids the use of arbitrary relative cut scores and incorporates the expected knowledge level of minimally qualified candidates as judged by experts practicing in the field. The Beuk compromise adjustment allows for a systematic adjustment of differences between expected results and actual results. The process of examination score equating following the use of the modified Angoff method promotes consistency from examination to examination, allowing for variations in test difficulty and candidate preparedness. Thus, the gate-keeping function of allowing only those qualified to enter a profession is better served and the public better protected. Hopefully, this explanation of the passing score setting process will be of benefit to those involved in the financial planning educational process as well as future CFP candidates.

Endnotes

1. In the past, the American Institute of Certified Public Accountants (AICPA) traditionally set the passing score at 75 percent for each of the four sections of the CPA exam. Candidates scoring at that level or above were successful on that particular part of the exam. The AICPA scoring committee felt that 30 percent of candidates taking the exam should pass. If, for example, only 25 percent passed a particular section, grading adjustment points were added until 30 percent of the candidates did pass. The 25 percent initial pass rate may have been the result of a group of unprepared or weak candidates. In adding points to allow another five percent of candidates to pass, the risk was that such arbitrary adjustment of scores may have allowed candidates to become certified who were not properly qualified to practice accounting. The AICPA began switching to the

- modified Angoff method in 1997. For a further discussion of this, see “A New Course for the CPA Examination,” by Nathan Garrett, Robert Moffie and Kevin Sweeney, *The CPA Journal*, July 1998.
2. *Guide to CFP™ Certification*, Certified Financial Planner Board of Standards, Denver, CO, 2001.
 3. Asking a panel of experts to estimate these probabilities is the main difficulty, and indeed, the main criticism, associated with Angoff. See “Is the Angoff Method Really Fundamentally Flawed?” by Michael Zieky, *CLEAR Exam Review*, Summer 1997, Vol. 8, No. 2, and “In Search of Truth and the Perfect Standard Setting Method: Is the Angoff Procedure the Best Available for Credentialing?” by Meredith Mullins and Ross Green, *CLEAR Exam Review*, Winter 1994, Vol. 5, No. 1.
 4. Reprinted with permission from the Certified Financial Planner Board of Standards.
 5. The numerical score examples in this paper are my own examples and are not based on any actual numbers. The CFP Board does not disclose this type of information.
 6. Since the purpose of the examination is to differentiate between those who meet the minimum job knowledge requirements established by the CFP Board and those who don't, extremely easy or extremely difficult questions are avoided. A question that can be answered by practically every tester does little to differentiate between qualified and unqualified candidates. Neither does a question that is so technical or obscure that virtually none of the candidates can answer it. Questions with extremely high or low difficulties are generally not included on the exam.
 7. “The Beuk Compromise Adjustment: Possible Rx for Troubled Cut Score Study Results,” by F. Jay Breyer, *CLEAR Exam Review*, Summer 1993, Vol. 4, No. 2.
 8. “Protecting the Public with Licensure Examinations: Validating the Cut Score Through Score Equating,” by F. Jay Breyer, working paper presented at the annual conference of the National Council on Measurement in Education, April 1995.

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