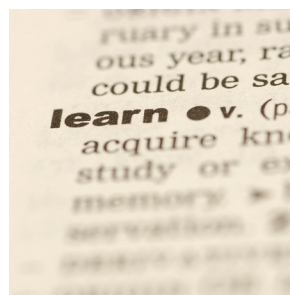


DAVE VOLEK'S BUSINESS ENGLISH™



**Risk & Reward:
Instructor's Manual**

DAVE VOLEK'S BUSINESS ENGLISH™



About Dave Volek

Engineer. Businessman. ESL Instructor. Inventor. At the heart of the comprehensive suite of Dave Volek's Business English (DVBE) modules lies my diverse expertise in business, engineering, and finance; my interest in people and education; and my passion for creating innovative solutions that bridge the inherent gaps of traditional business English instruction. My proven, unconventional approach helps business and technical professionals build strong, practical English skills for the dynamic workplace.

Do you like this kind of business English training?

This DVBE module is available for evaluation of the DVBE program. If you like presenting this kind of business English, you can buy similar modules at www.dvbe.bz

Risk and Reward: Instructor's Manual

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INTRODUCTION



Engage

Experienced business people know that no business project has a 100% chance of success. Any project can fail for a number of reasons: a poor business plan or management, unexpected response from the competition, changing consumer tastes, changing prices, or government legislation. Risk is a natural part of business and must be managed. Students will quickly realize that risk is a great part of this Dave Volek's Business English (DVBE) module and will look forward to using their business English (BE) to resolve this common business challenge.

Study

This DVBE module has a vocabulary quiz as its formal study. Students also get lots of practice working with numbers. They will be explaining both simple and complex calculations—and “putting the right numbers in the right boxes.” This “right numbers/right boxes” exercise may be somewhat frustrating for both the instructor and students, but it is certainly very realistic as to what happens in real business.

Also with these numbers, students also get some practice communicating with basic statistics—lessons not often found in other BE programs.

Activate

Students will be challenged to see if they can manage risk, which keeps them activated in some great business conversation. They will also be competing against each other to make the best rate of return.

Business

For many business people, the business components and principles of this exercise will not be that difficult to understand. Your average first-year student at a business school will readily be able to handle this business topic. So too will those business people with less formal training yet are working in international business. Trying to express themselves in English will pose the real challenge.

The students can engage in this seminar at several levels. They can make their investment decision based on an informal, ad hoc basis. Or they can do some primitive financial calculations, which are provided in this module, as a “listening exercise.” If the students have some financial training, they can make their decisions based on an intricate financial analysis. Regardless of how much business analysis the students want to get into, Risk & Reward (R&R) is a great business English conversation exercise.

R&R uses its own variation of the well known compound interest formula to keep score (make sure the class has at least one calculator with the “log” and “10^x” functions).

Generally speaking, the riskier investments have greater rewards—which is more or less how real business works. But taking on the riskier investments could lead to bankruptcy. To be successful in R&R, students must take risk at the right times—and that’s just great business English conversation!

PREPARATION



I'm not going to hide the truth from you: R&R requires significantly more instructor preparation than the average BE lesson offered by the established BE publishers. Rather than being deterred by this challenge, you really should give R&R a try. It—and the other DVBE modules—are a unique way for BE training. I am sure your students will like this new way. I feel they—not me—will convince you buy to the rest of the DVBE program.

In essence, by considering this module for your BE classes, you are actually doing an informal risk analysis for your career. You can stay with the known and proven BE programs from the established publishers, which will keep you in the same safe place as you are right now.

Or you can spend a few hours preparing for R&R and trying it out in one of your BE classes. You could find this type of business English is really not for you, and all you have lost is those few hours.

When you try this free DVBE module, you just might find DVBE works very well for you—and will lead you into a new and prosperous career adventure. You could be regarded as a top-notch BE instructor which puts you in higher demand and in a higher pay scale.

Isn't the risk of these few extra hours preparing for R&R worth the possible reward?

Before the Class

From the *Resource Kit*, print out the *40 Investment Cards* and paste them on heavy-stock paper. Then cut out the cards. You may even want to laminate them. Stack them in a card pile.

Print out the *20 Random Number Cards* and paste them on heavy-stock paper. Cut out these cards and keep them in a separate card pile from the Investment Cards.

There is one DVBE logo page in the *Resource Kit*. This page can be printed, trimmed, and affixed to the back of the card faces.

Print out the *Student's Manual* and provide a copy for each student.

Print out several copies of *Cash Flow Sheet 1* and *Cash Flow Sheet 2* (located in the *Student's Manual*). Review the section entitled *Using the Cash Flow Sheet* (located in this manual); it tells you how to enter the numbers correctly, so you can teach the students how to do this later.

I really recommend that you “play” R&R by yourself before presenting it to the class. Choosing the best of three investments for a 20-year cycle (just as your students will be doing in class) will give you some experience working with the cash flow sheets.

Reading Activity

Hand out the *Student's Manual*.

You can have the students do the reading and vocabulary quizzes as homework. If there is enough compliance and comprehension, you can move straight into playing the game when the class comes together.

Some students and classes might want or need some time to read aloud in class to ensure that their pronunciation and comprehension are correct. The students can do the vocabulary quiz as they are reading it.

Have the students read aloud the equations. Do not underestimate how much they need this practice.

Here's a little grammar review on **exponents** in case you haven't worked with this level of math for a while:

- x^2 is said as *x squared*, or *x to the second (power)*, or *x exponent two*.
- 10^3 is said as *ten cubed*, or *ten to the third (power)*, or *ten exponent three*
- $(1+R)^8$ is said as *one plus 'R' to the eighth (power)* or *one plus 'R' exponent eight*
- 1.12^n is said as *one point one two to the nth (power)* or *one point one two exponent 'n'*

Vocabulary Quiz 1 Answers

1-b, 2-f, 3-a, 4-h, 5-d, 6-e, 7-c, 8-l, 9-i, 10-g, 11-o, 12-k, 13-k, 14-j, 15-s, 16-p, 17-m, 18-t, 19-q, 20-x, 21-u, 22-r, 23-w, 24-a, 25-v, 26-d, 27-z, 28-f, 29-y, 30-b, 31-c, 32-g, 33-e

Classroom Activity

Allow at least one hour for this exercise.

Put the students into groups of two to four. Hand out one copy of *Cash Flow Sheet 1* to each student. It shows €1,000 a year for the first six

years as the seed money. One person should be responsible for recording the group's investment information.

Give a short lecture on the cash flow sheet. Explain that for each year, the students will be making one investment. Show them the columns for the seed money, where to put the cash flow of their successful investments, and the total investment they can make each year.

Expect a little confusion as students learn this new challenging activity. Even native English speakers will need some clarification about these rules and procedures. Most BE students will get a great sense of accomplishment when they finally comprehend something that they initially didn't understand very well.

Give each group three investment cards. Tell them that they must choose one of these investments. They will use their English to discuss the pros and cons of each investment and make their decision.

When a group has made its decision, it should call you over. Its chosen investment will have a probability of success. Have the group draw a ***Random Number Card***.

If the random number is less than the probability of success, the investment is deemed successful. The group is awarded the investment's cash flow, which is entered on the group's cash flow sheet. Check to see that the group enters the cash flow properly: expect them to be a little confused with "start of cash flow" and "duration of cash flow."

If the random number is greater than the Probability of Success, there is no cash flow to be awarded; the group just proceeds to the next year.

Return the ***Random Number Card*** and the three ***Investment Cards*** to the appropriate cardpiles.

Have the group calculate the investment for the new year (initially, it will be just €1,000, but this will change). Then give the group three new ***Investment Cards*** and let them decide which investment they will make. Repeat this process, year-by-year, for the duration of the class time.

About half way through this exercise, ask the groups to calculate their rate of return. This should remind them that they are in a competition and give them some English practice working with the equation. See the section in this manual entitled ***Rate of Return***.

Cash Flow Sheet 2 is used when the group's cash flow needs to be recorded past year 20.

When the activity is nearing its end, give the groups a ten-minute warning. Their strategy, if winning is a priority, should change with this

warning. And a change of strategy offers an additional business English topic to talk about.

Have the students calculate their rate of return. Acknowledge the group with the highest rate of return for their shrewd business skills. Commend the entire class on their use of English to communicate and complete this business exercise.

Additional Class Activities

Appointing an Assistant

Consider appointing one student as your assistant instead of assigning him or her to a group. Being your assistant will still be good English practice for him or her, especially if he or she is an accountant.

You might want to give your assistant a copy of *Using the Cash Flow Sheet* (in this manual) to study before class. You can review it with your assistant beforehand. Perhaps you should watch him or her during the first couple of rounds to ensure that the instructions have been understood.

In classroom trials of R&R, it has been the writer's experience that two groups—after they get the hang of the exercise—will keep the instructor quite busy. So give the position of an assistant serious consideration when you have three or more groups.

If you are using an assistant, make additional sets of investment and random number cards.

Writing Practice

After the class has gone through a session of R&R, ask them to write a short paragraph describing a good strategy to succeed at this program.

Conversation

Have the students pair up and discuss R&R strategies with each other.

Do it Again

If the students have some fairly elaborate explanations of how to be successful in R&R, they may want to test their theories. Give them

another chance at the program. Now that they know the ropes to the exercise, they can concentrate a little more on their English.

Further Reading on Business Risk

Have the students read the section called *Further Reading on Business Risk* (located in the *Student's Manual*), silently or aloud—whatever the class needs. It should generate some interesting discussion.

A Sample Conversation

Have the students take on a role and go through the dialogue provided in the section called *A Sample Conversation* (located in the *Student's Manual*). You should assume one of these roles to show them the intonation.

Vocabulary Quiz 2

Have the students complete *Vocabulary Quiz 2* (located in the *Student's Manual*). This quiz encompasses information from the sections entitled *Further Reading on Business Risk* and *A Sample Conversation*.

Vocabulary Quiz 2 Answers

1-a, 2-b, 3-g, 4-e, 5-d, 6-c, 7-k, 8-l, 9-f, 10-h, 11-o, 12-j, 13-i, 14-m, 15-s, 16-p, 17-r, 18-n, 19-u, 20-t, 21-q, 22-z, 23-v, 24-x, 25-w, 26-d, 27-a, 28-y, 29-c, 30-g, 31-e, 32-b, 33-f, 34-l, 35-m, 36-j, 37-o, 38-h, 39-i, 40-k, 41-r, 42-n, 43-u, 44-p, 45-w, 46-t, 47-q, 48-y, 49-s, 50-x, 51-c, 52-v, 53-b, 54-z, 55-a

Teaching Some Business Skills

You might want to give a short analytical business lecture that should help students “play” R&R a little more wisely. This lecture will give them some listening and questioning practice. See the section entitled *Teaching Business Skills* (located in this manual).

Dave Volek's Summary

Well, you've made it this far into R&R. You probably have noticed these two unique objectives of DVBE:

1. My first objective is to place BE students into very realistic business situations, which usually requires working with lots of numbers.
2. My second objective is to give the instructor just enough business training to present the material. Such an instructor need not be an expert in business, but must be willing to engage in some self-study.

I ask you to compare other BE programs with these two objectives:

- Do these programs put students into some realistic business scenarios that build skills and confidence as students move from the classroom to international business?
- Do these programs provide the instructor with some business training, so that the instructor can lead the students through these realistic scenarios?

If you are still somewhat skeptical, I ask you to remember who will be the final judge of DVBE. This judge will not be I, the writer of DVBE—or you, the potential instructor—or even a Ph.D. in English as a second/foreign language (ESL/EFL) pedagogical theory. The judge will be your BE students.

And it takes only a few hours of your time to put the DVBE program on trial. You don't have much to lose by trying R&R out—and that's just good management of your risk and reward for your career.

I want to get feedback from those who are using all my DVBE modules. So I am offering free support. If you have any questions, concerns, or little stories about this module, feel free to contact me at dave@dube.bz. I look forward to hearing from you.

USING THE CASH FLOW SHEET



This section will show you how to work with the cash flow sheet. We will model a student group using the cash flow sheet and **Investment #6, #8, and #37**.

Our sheet starts in Year 1, which looks like this:

Table 1: Example Cash Flow Sheet—Year 1

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2		1,000			
3		1,000			
4		1,000			
5		1,000			
6		1,000			
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

We are in Year 1. We add all the cells in row 1 of columns 3 to 6 to make the total for Year 1, which happens to be the €1,000 seed money allocated to the first year. For this exercise, we will consider first investment as a failure. We then proceed to Year 2.

Table 2: Example Cash Flow Sheet—Year 2

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3		1,000	(1)		
4		1,000	(2)		
5		1,000	(3) [1]	300	
6		1,000	[2]	300	
7			[3]	300	
8			[4]	300	
9			[5]	300	
10			[6]	300	
11			[7]	300	
12			[8]	300	
13			[9]	300	
14			[10]	300	
15			[11]	300	
16			[12]	300	
17					
18					
19					
20					

We have shaded the first year because it is finished. We are now concerned with Year 2. The amount we have for investment in Year 2 is €1,000. We choose *Investment #6*, which offers €300 per €1,000 for 12 years, starting in three years. We are successful. We get €300 for these 12 years ($€300 \times €1,000 \div €1,000$).

To put the right numbers in the right boxes correctly, we need to organize our 'counts.' First we have to count off the years when the cash flow starts. The count is shown in the table as "(x)." We can start adding the €300 extra cash flow in Year 5. Then we count off how many years this cash flow lasts, and this count is shown as "[x]."

Then we move to Year 3.

Table 3: Example Cash Flow Sheet—Year 3

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3	1,000	1,000			
4		1,000			
5		1,000	300		
6		1,000	300		
7			300		
8			300		
9			300		
10			300		
11			300		
12			300		
13			300		
14			300		
15			300		
16			300		
17					
18					
19					
20					

Year 2 is shaded to signify that it is now over. We are now in Year 3. Even though we had a successful investment in Year 2, we can't collect this cash flow until Year 5. So for Year 3, we still only have our seed money to invest (i.e., €1,000). For Year 3, our investment is unsuccessful, so there is nothing to add to the table other than the shading to signify Year 3 is over.

Table 4: Example Cash Flow Sheet—Year 4

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3	1,000	1,000			
4	1,000	1,000			
5		1,000	300		
6		1,000	300		
7			300		
8			300		
9			300		
10			300		
11			300		
12			300		
13			300		
14			300		
15			300		
16			300		
17					
18					
19					
20					

Year 4 is similar to Year 3. We have only €1,000 to invest, and our chosen investment is unsuccessful.

Table 5: Example Cash Flow Sheet—Year 5

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3	1,000	1,000			
4	1,000	1,000			
5	1,300	1,000	300		
6		1,000	300	(1)	
7			300	(2)	
8			300	(3)	
9			300	(4)	
10			300	(5) [1]	1,170
11			300	[2]	1,170
12			300	[3]	1,170
13			300	[4]	1,170
14			300		
15			300		
16			300		
17					
18					
19					
20					

In Year 5, we can invest €1,000 of seed money plus the €300 coming from our successful investment in Year 2. This gives a total of €1,300 to invest in Year 5. We choose *Investment #8*, which is successful. It gives us an annual cash flow of €900 per €1,000, which starts in five years and lasts for four years. But since we have a different cash flow than €1,000, we must do some calculations. Our cash flow is actually $€900 \times €1,300 \div €1,000$ which equals €1,170.

If you have a little trouble understanding this calculation, we will present it in a more algebraically correct format:

$$\text{Total Annual Cash Flow} = \frac{\text{€900 Cash Flow}}{\text{€1,000 Investment}} \times \text{€1,300 Investment}$$

Note that the units “€ Investment” appear in both the numerator and denominator, which means they cancel each other out. The unit that remains for this equation is “€ Cash Flow”

Just as we did in Year 2, we must do our counts to put the right numbers in the right boxes. Note the (x) and [x] in the fifth column.

We shouldn’t add the total cash flow in any year until we are actually making the investment for that year. If we add up the total investments for future years, we will have to change these values as more successful investments are realized.

Table 6: Example Cash Flow Sheet—Year 6

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3	1,000	1,000			
4	1,000	1,000			
5	1,300	1,000	300		
6	1,300	1,000	300		
7			300		
8			300		
9			300		
10			300	1,170	
11			300	1,170	
12			300	1,170	
13			300	1,170	
14			300		
15			300		
16			300		
17					
18					
19					
20					

As we had in Year 5, we have €1,300 to invest in Year 6. But there is no success in this year, so we go to Year 7.

Table 7: Example Cash Flow Sheet—Year 7

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3	1,000	1,000			
4	1,000	1,000			
5	1,300	1,000	300		
6	1,300	1,000	300		
7	300		300		
8			300		(1) [1] 1,500
9			300		[2] 1,500
10			300	1,170	[3] 1,500
11			300	1,170	[4] 1,500
12			300	1,170	[5] 1,500
13			300	1,170	[6] 1,500
14			300		[7] 1,500
15			300		[8] 1,500
16			300		
17					
18					
19					
20					

In Year 7, the seed money is finished. There's no more seed money coming in. We have to depend on our successful investments from our first six years. For Year 7, we have only €300 to invest. We decide to take a risk on **Investment #37**, and it is successful. **Investment #37** gives us a cash flow of €5,000 per €1,000 of investment, which yields €1,500 ($€300 \times €5,000 \div €1,000$). It starts in one year and lasts for eight years. We enter this cash flow into our sheet. Note again the counts to keep us straight and put the right numbers in the right boxes.

Table 8: Example Cash Flow Sheet—Year 8

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3	1,000	1,000			
4	1,000	1,000			
5	1,300	1,000	300		
6	1,300	1,000	300		
7	300		300		
8	1,800		300		1,500
9		(1)	300		1,500
10		(2)	300	1,170	1,500
11		(3) [1]	720	300	1,170
12		[2]	720	300	1,170
13		[3]	720	300	1,170
14		[4]	720	300	1,500
15			300		1,500
16			300		
17					
18					
19					
20					

In Year 8, we now have a respectable amount to invest again, and we decide to take a safe investment. We choose *Investment #3*, which is successful. Here we get €400 per €1,000 for our cash flow which comes to €720 ($€400 \times €1,800 \div €1,000$). Cash flow starts in three years and lasts for four years (See how your students will challenge their business English skills to keep the “starts” and the “lasts” communicated properly). We can now use the third column because it has been empty since Year 6.

We are now going to assume that for the next four years, we have unsuccessful investments. We are now at Year 13.

Table 9: Example Cash Flow Sheet—Year 13

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	
1	1,000	1,000				
2	1,000	1,000				
3	1,000	1,000				
4	1,000	1,000				
5	1,300	1,000	300			
6	1,300	1,000	300			
7	300		300			
8	1,800		300		1,500	
9	1,800		300		1,500	
10	2,970		300	1,170	1,500	
11	3,690	720	300	1,170	1,500	
12	3,690	720	300	1,170	1,500	
13	3,690	720	300	1,170	1,500	
14		720	300	(1) [1]	1,107	1,500
15			300	[2]	1,107	1,500
16			300	[3]	1,107	
17				[4]	1,107	
18						
19						
20						

We have €3,690 to invest ($720 + 300 + 1,170 + 1,500$). We decide to be completely safe and choose *Investment #1*. It has a cash flow of €300 per €1,000, which gives us €1,107 ($€300 \times €3,690 \div €1,000$). We do the counts (start in one year, last for four years). We can put the cash flow in the fifth column because it became empty in Year 14.

Table 10: Example Cash Flow Sheet—Year 14

Year	Total Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)	Cash Flow (€)
1	1,000	1,000			
2	1,000	1,000			
3	1,000	1,000			
4	1,000	1,000			
5	1,300	1,000	300		
6	1,300	1,000	300		
7	300		300		
8	1,800		300		1,500
9	1,800		300		1,500
10	2,970		300	1,170	1,500
11	3,690	720	300	1,170	1,500
12	3,690	720	300	1,170	1,500
13	3,690	720	300	1,170	1,500
14	3,627	720	300	1,107	1,500
15			300	1,107	1,500
16			300	1,107	
17				1,107	
18					
19					
20					

Rate of Return

The class is now coming to a close. It is time to stop investing and calculate our rate of return.

According to the formula in the student's manual, we have:

$$x = [\log(3,627/1,000)] \div 14 = 0.0400$$

$$R = (10^{0.0400} - 1) \times 100\% = 9.65\%$$

A rate of return of 9.65% is quite reasonable. The designer of this exercise (i.e., Dave Volek) had a best score of 12.5% after several 100-year simulations. But it is quite possible to get better than average luck, which can happen in a 20-year simulation.

TEACHING BUSINESS SKILLS



To compare the three investments, students have to consider four variables:

1. probability of success
2. cash flow
3. duration of cash flow
4. delay of cash flow

You will likely find some R&R students quite content to evaluate these parameters qualitatively, without much number crunching.

However, some students may want to do a little analysis to help them compare the investments. Here is where you can present some business skills they might find useful in R&R.

You may feel that you are inadequate for the task of presenting this business lecture. But think of your students: they are likely to encounter a real business presentation some day. If they acquire some skills and confidence from your lecture, they will be better prepared for this future presentation. Your lecture is actually a stepping stone between the ESL classroom and the real business world. Do not dismiss your role here too easily: there's no where else your students can get this practice.

There may be some difficulties and frustrations with this business lecture (mostly because of their English), but your students should eventually be able to get the ideas. Be prepared to stay with them. They will appreciate the meeting this challenge.

And remember that each time you give this lecture, you will get better at it. Do not assume that you will present R&R just once.

With more experience, you may start feeling quite confident teaching this kind of business analysis. But we recommend that you teach these business skills with some tact. If you try to pretend that you are some kind of business expert, some students may lose face. And you could lose face if your students are better in business analysis than you.

Instead of “teaching business,” tell them that you are giving them a chance to practice their listening and questioning skills for business English. Make no judgement if it seems that your students are hearing this kind of analysis for the first time.

We have provided two lectures for you: Analyzing R&R Investments—Basic and Intermediate [located in this manual]. You can choose which one best suits your students. If the students are at the intermediate level

and have only a passing interest in business techniques, you might want to forego this exercise entirely.

Analyzing R&R Investments (Basic) is quite easy to understand to present and understand. It just involves some simple calculations: you might be surprised at how little training your students have had working with equations in English. From a business perspective, the analytical technique in the basic lecture is actually not that great. But is easy to present, and it does lead to better decisions than just using “common sense.”

Analyzing R&R Investments (Intermediate) introduces some basic statistics into the calculations. This analytical tool is much better than the tool of the basic lecture, but it is more difficult to present and comprehend. If your students are quite keen, they will like this challenge.

You should probably present the lecture after they have gone through a complete session of R&R and are quite familiar with the process. They might want to do the exercise again, using these new tools.

If they do the exercise again, some students might not want to take any analytical approach to making decisions. Leave them to whatever analytical processes they feel comfortable with. And if they are taking an analytical approach, you probably shouldn't be checking their calculations unless they ask you to. Your main job is to provide a forum for some realistic business conversation, not teach business skills.

In case you have some difficulties with these lectures, have some copies of the “lecture notes” available for the students' reading. Between your lecture and these notes, they should get the idea—and it's still good business English practice.

Normalization

Most business people should be able to understand you if you keep your lecture in terms of “per €1,000 invested”, rather than picking some arbitrary cash flow like €1,200, €1,800, or €3,627. This approach is often called “normalization” which means making measurements to one known standard for easy comparison (for R&R, evaluations are normalized to €1,000 of investment).

Analyzing R&R Investments (Intermediate)

This paper will provide you with some useful techniques to compare the various investments of R&R.

Step 1

For each investment, calculate the total cash from the investment if it is successful. You do this by multiplying the cash flow by the duration. Using *Investment #7*, for example, the total cash received is $€300 \times 8 = €2,400$.

Note that “cash flow” and “cash received” are two different values in this lecture. Do not use them interchangeably.

Step 2

Then calculate the profit. Because we invested €1,000, the profit for *Investment #7* (if successful) is $€2,400 - €1,000 = €1,400$.

Step 3

For each investment, there are two possibilities: (1) **success**—the investor will receive the cash flow, or (2) **failure**—the investor will lose the entire investment. In R&R, the investor knows the probability of success and failure. The success probability is on the investment profile. The probability of failure is calculated from the success because the success and failure probabilities must add up to 100%. So for *Investment #7*, the probability of success is 85%, which makes the probability of failure 15%.

In other words, for *Investment #7* there is an 85% chance that we will receive €2,400 (or €1,400 profit). Conversely, there is a 15% chance that we will lose our €1000 investment.

Step 4

The equation below quantifies this relationship between profit from success and loss from failure.

$E = x \times (CR - I) - (1 - x) \times I$, where:

- **E** = expected value (a common term for financial analysis)
- **x** = probability of success (note that you must convert this from a percentage to a decimal)
- **CR** = total cash received if the investment is successful
- **I** = investment made (which is €1,000 because we are normalizing all investments in terms of “per €1,000 invested”)

For **Investment #7**, we have:

$$\begin{aligned}
 \mathbf{E} &= 0.85 \times (\text{€}2,400 - \text{€}1,000) - (1 - 0.85) \times \text{€}1,000 \\
 &= 0.85 \times \text{€}1,400 - 0.15 \times \text{€}1,000 \\
 &= \text{€}1,190 - \text{€}150 \\
 &= \text{€}1,040
 \end{aligned}$$

This €1,040 figure is telling the investor that if he or she comes across this investment many times, this is the profit—on average—for each time that investment is made. In essence, this equation incorporates success, failure, and the outcomes of success and failure into one value. The investor can compare this value with other investments to see which is best.

Step 5

Let's assume that the group also has **Investment #21** to choose from. Here is the calculation:

- Total cash received = €700 × 12 = €8,400
- Expected value = 0.50 × (€8,400 - €1,000) - (1 - 0.50) × €1,000 = €3,700 - €500 = €3,200

Step 6

Let's assume that the group also has **Investment #35** to choose from. Here is the calculation:

- Total cash received = €4,600 × 8 = €36,800
- Expected value = 0.15 × (€36,800 - €1,000) - (1 - 0.15) × €1,000 = €5,370 - €850 = €4,520

Step 7

Let's bring all E values together:

- **Investment #7**: E = €1,040
- **Investment #21**: E = €3,200
- **Investment #35**: E = €4,520

With this financial tool, one sees that **Investment #35** is superior to the other two investments. In the long term, the investor should choose **Investment #35** even though it will fail 85% of the time.

Although **Investment #35** is a better investment, the investor must consider that this investment could easily fail six, eight, and even ten times in a row. Does the investor have enough cash flow to take on this risk? This is the dilemma of R&R: the better investments are also the riskier investments.

Analyzing R&R Investments (Basic)

This paper will provide you with some useful techniques to compare the various investments of Risk & Reward. We assume that we have drawn *Investment #14*, *#15*, and *#17*. All three have similar risk. We are trying to determine the best.

Step 1

For each investment, calculate the total cash from the investment if it is successful. You do this by multiplying the cash flow by the duration. With *Investment #14* (with a success rate of 70%), for example, we can calculate the total cash received as $\text{€}1,300 \text{ per year} \times 4 \text{ years} = \text{€}5,200$.

Step 2

We do a similar analysis for the next investment (i.e., *Investment #15*), which has a success rate of 65%. We have $\text{€}400 \text{ per year} \times 12 \text{ years} = \text{€}4,800$.

Step 3

We do a similar analysis for the next investment (i.e., *Investment #17*), which has a success rate of 60%. We have $\text{€}600 \text{ per year} \times 12 \text{ years} = \text{€}7,200$.

Step 4

We then compare the three investments:

Investment	Probability of Success	Total Cash
#14	70%	€5,200
#15	65%	€4,800
#17	60%	€7,200

When we compare *Investment #14* to *#15*, we see that *#14* has a bigger reward yet has less risk. With both parameters favoring *#14*, we should choose *#14* and discard *#15*.

With *Investment #15* out of the way, we then compare to *#14* to *#17*. Now the parameters are not so straightforward. *Number 14* has less risk, but also has a lower reward. But when we see that *#17* offers almost 40% more reward for a slightly riskier investment, we should choose *#17*.

Analyzing R&R Investments (Advanced)

When giving your business lecture, there is another reason you should not appear too eager to be seen as a business expert. The basic and intermediate analyses are useful in R&R, but they are far too simplistic for most other financial analyses. You could seem foolish if you claimed you were teaching a good business technique.

In essence, neither lecture quantified the time aspect of money (i.e., the sooner we get the reward, the sooner we put it to work to earn more money). If your students are doing some calculations based on the basic or intermediate lectures, they will likely be combining this analysis with the “when” and “how long” of cash flow. Basically, they will incorporate “time” in a qualitative sense.

If your students have some experience in finance, they might want to do a more thorough analysis that quantifies time. However, such analysis would require lengthy calculations, thus taking too much time from their business English practice. If it seems some of your class wants to go this route, give them the *Financial Analysis Sheet For R&R Investments* (located in the *Resource Kit*); it has all the calculations done. With this sheet, they can compare the “expected net present value” at various “discount rates” to make their decision. Such students would be happy with this sheet—and will stay focussed on English, not calculations.

Chances are most of your DVBE classes will not want to get involved this deeply. So do not give a class the *Financial Analysis Sheet For R&R Investments* unless it expresses an interest in higher level finance.

This module is not going to give you the training for this level of financial analysis. If you are interested in these techniques, visit www.oilfinancier.com and go to the finance section. There you can learn about quantifying the “time aspect” of money, which is quite instrumental in making business decisions. Such training will certainly make you a better BE instructor.