

Living within a Pegged Currency Exchange Rate Regime: An In-Class Simulation Exercise

Todd Erkis

Karen Hogan*

Abstract

This exercise is an in-class simulation about a fictitious country known as Hawkville. Hawkville has a currency, known as “Eyas”, that is pegged to a much more established and well regarded currency; the United States Dollar (\$) and USD). The students are randomly assigned to teams in the Hawkville economy (grocery store, household, and currency exchange) with the Instructor playing the part of the Hawkville Central Bank. The simulation is run three times (covering three hypothetical days) where the market economic environment changes due to Hawkville Federal Bank (the central bank) running out of foreign currency reserves. The lack of foreign currency reserves leads to inflation, which works its way into the economy. The teams see firsthand some of the possible consequences and challenges consumers and businesses in a pegged currency regime face. At the conclusion of the exercise a real-life example of a failed pegged currency regime is discussed.

Overall Logistics and Instructor’s Summary for Case Simulation:

The following is the detailed logistics and instructor’s summary for defining the players and their roles in the simulation game. We also set up step by step instructions for the amount of time to allocate to each iteration of the simulation. Pre and Post readings are suggested in order to highlight the current real world application of this exercise. Instructions for splitting the class into teams are discussed and props needed to use in the simulation are defined and discussed. This exercise can be done in any class of any size such as International Finance, International Economics, International Business and/or International Accounting that discusses foreign exchange currencies.

- A. This simulation could be done in either a one, two, or three-day course schedule. For the purposes of this simulation we will work with a popular two-day (75 minute) class schedule. The first day is a 20 minute introduction and initial simulation and the second day is a 75 minute class session.
- B. Prior to the exercise students should read the following articles from Bloomberg and WSJ websites¹
 - a. <http://www.wsj.com/articles/beer-becomes-the-latest-scarcity-in-a-venezuela-wracked-by-shortages-1461963129>
 - b. <http://www.bloomberg.com/news/features/2016-05-13/venezuela-s-only-booming-business-buy-and-flip-at-1-000-markup>
 - c. <http://www.bloomberg.com/features/2016-venezuela-diary/>
- C. Class Session 1 (20 minutes at the beginning or end of class)
 - a. Overview of the situation and objective (5 minutes)
 - b. Day 1 activities (10 minutes)
 - c. Recap of Day 1 (5 minutes)
- D. Class Session 2 (75 minute class)
 - a. Getting back into teams (5 minutes)
 - b. Day 2 activities (15 minutes)

¹ Please check with your own library regarding the copyright privileges for printing out and distributing to students. The articles noted above are current at this point, but the instructor should find similar articles depending on the country they are looking to discuss. For the purposes of this exercise we are discussing Venezuela.

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- c. Recap of Day 2 (10 minutes)
 - d. Set up of Day 3 (5 minutes)
 - e. Day 3 activities (15 minutes)
 - f. Recap of Day 3 and discussion of Venezuela reading assignments (10 minutes)
 - g. Graded written activity (15 minutes)
- E. The class is broken up into 9 teams². It is important to have exactly 9 teams as the exchange rates and the amounts of starting currency are calibrated for 9 teams³. Given our assumed class size of 30 students, we will have three Grocery Store teams, five Hawkville Household teams and one Currency Exchange team. Each grocery store and household should have a separate number (i.e., Grocery #1, Grocery #2, Household #1, Household #2 etc.). The numbers will be used later in the exercise. Each student is randomly assigned to a team. The instructor will play a few roles in the class exercise: Hawkville Federal Bank, the government of Hawkville and the foreign supplier of flour and USD currency
- F. The simulation requires the students to move around so a large space with flexible seating is recommended. It is suggested that the room be set up with the instructor (Hawkville Federal Bank) at the front of the room. The students in each team must sit together as they will work as one team during the simulation. The households will start on the outside of the room, however, the households will be moving around the room so it isn't important to have a fixed place during the exercise – just a place to sit at the end of each day. The grocery stores should be spread around the room so they are not next to each other if possible. It is best if the students must move to interact with each of the stores (i.e., they have to move around to find the best prices). It is also important that no texting or cell phones should be allowed to be used and everyone on a team must move around together for consistency.
- G. It should be noted that in some circumstances it may not be possible for a team to complete their daily goal. In that case, they should just do the best they can and be able to explain at the end why or why not they could accomplish their goal during the class discussion. It is important to emphasize to the students that each team should focus on attempting to complete their goal, not to maximize profit. Teams trying to maximize profit, instead of simply attempting to complete their goal, can adversely impact the success of the simulation.
- H. You will need \$150 in \$1 dollar bills or fake \$1 dollar bills. Additionally, 5,000 units in paper monopoly money representing the Hawkville currency Eya denominations. Various denominations will be needed including 50s, 20s, 10s, 5s, and 1s. Also needed will be 18 brown paper bags representing flour. You may fill the bags with anything (rice or shredded paper works well) as they are just props and write "Flour" on the outside of the bag in marker. Cardboard or plain white paper for the businesses to display prices will also be needed.
- I. The instructor will keep track of the simulation using a chart, like the one in Table I as shown in the appendix, filling in the amount and price of flour purchased by each household, the prices for flour in each grocery and the exchange rates offered by the currency exchanges. It also helps to have either a front board or a flip chart to write the current pegged and international reported exchange rates at the front of the room.

² This analysis assumes a class size of about 30 students, which would mean 3 or 4 to a team. Depending on the size of your classes you may need to adjust this number

³ Class sizes that are very large will need to recalibrate the amount of starting currency etc.

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- J. Each simulated day will begin with the instructor reading the current situation in Hawkville. After that presentation, the households leave the room while the groceries purchase flour and groceries and currency exchanges set prices. It is important that households not be in the room when prices are being set. Having the household teams step into the hall would be a good option to keep the prices secret until the simulation starts. The instructor should summarize for the households what will happen in the room (groceries will buy flour and set prices in U.S. dollars and Eyas) before they leave the room so the households understand the working of the economy as well.
- K. Buying and selling can only occur with the supplied currency (either in USD or Eyas) and has to be done by physically providing the currency in person. Part of the exercise (after Day 1) is understanding the pressure to be first in line, determining what currency to use to purchase goods and finding the best prices. All teams must stay together and all team members must be present to make a transaction.
- L. The instructor (in the role of the government) should “crack down” on currency exchanges if they attempt to gouge the consumers on exchange rates. Too high exchange rates could shut down the “economy” and negatively impact the exercise. The instructor should make sure the exchange rate (number of Eyas for \$1.00) is no more than a few Eyas over their cost of funds. The currency exchanges must also be set their bid and ask rates so no currency arbitrage can be performed by the households or groceries.

I. Initial Situation Communicated to Students Before Day 1 Begins

The instructor reads the following situation to the entire class just prior to the Day 1 simulation and prior to the households leaving the room. This is where students will find out what the simulation is about and what the goals of their team are.

- A. You live in the country of Hawkville. Hawkville makes many of its goods but totally relies on imported flour because the country has only a small amount land to grow crops. The exercise is about the market for flour – no other goods or services are important or relevant to the exercise. The government has pegged its currency, the “Eyas,” to the U.S. dollar (USD) at a rate of 5 Eyas = \$1.00. [The instructor will write the pegged exchange rate on the board or in some visible place.] There is also an international “market rate” that will be known each day. The current ask rate is 6 Eyas = \$1.00 with the bid at 4 Eyas = \$1.00.⁴

Each student has been randomly assigned to a team who will work together on the exercise.⁵ Each team has a role in the Hawkville economy as a Grocery Store, Hawk Household or a Currency Exchange. Once assigned, everyone will remain on the same team for the entire exercise. Each team will have a goal related to their role in the economy that they will attempt to achieve each “day” (there will be several days in the exercise). Your goal is known only to your group – please do not share your goal with other groups. Your goal will not change during the exercise and you will be graded on how well you attempt to achieve your goal. Note that it may not be possible to complete your goal every day so just do the best you can as a team and be able to explain why or why not you could accomplish your goal. Note that your goal is not to maximize your profits but to achieve a certain objective – fulfilling your objective is “winning” at the simulation so please focus on that goal only.

⁴ Optional Question: Does anyone know what an Eyas is? Answer: a baby hawk.

⁵ It helps with the efficiency of the day for the students to be placed in teams prior to starting the exercise if possible.

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B. Goals:⁶

The instructor hands out goals to each group and gives the groups time to read their goal and privately answers any questions about the goals. The goals are noted below separated by each participant and do not change during the exercise. There is a goal for the Hawkville Federal Bank (central bank) too. This will be used by the instructor, but also allows the ability for a student team to play this role if desired or if the size of the class necessitates it. The instructor will play the role of the only bank in Hawkville, Hawkville Federal Bank, the role of the government officials and also supply flour packages to the grocery stores. At the beginning of each day, the businesses (groceries and currency exchanges) will set up for the day by obtaining flour and setting prices / exchange rates. When the businesses are ready, the households will shop for flour. When the households are finished shopping, the businesses will close and the day will end. At the end of each day, each team will briefly explain to the class what happened from their point of view, if they accomplished their goal, and any other observations they have about the Hawkville economy. It is expected that every member of each team will lead the end of day discussion at least once.

- a) Hawkville Federal Bank (INSTRUCTOR or Team of Students): Your primary goal is to make sure the grocery stores have enough dollars to purchase food for the country. Exchanging currency with households in Hawkville is not allowed as it is illegal for private citizens to transact in any currency but Eyas (although this law is rarely enforced). The instructor will also provide currency to the currency exchange when needed at a “special rate” so they have enough currency. The rate obtained by the currency exchanges is in the currency exchange’s daily instructions.
- b) Grocery Stores: Your primary goal is to sell as many packages of flour as possible. You look to make a small profit on each sale and cannot sell a package of flour for less (in Eyas or USD) than it costs you to obtain. There are no domestic suppliers of flour and your supplier of flour in the U.S. charges \$3 per package and only accepts USD. The INSTRUCTOR will act as the foreign market selling the flour packages.
- c) Hawk Household: Your goal is to purchase the 3 packages of flour your family needs each day. You can survive on 2 packages of flour but it will be tight. With 1 package of flour, some in your family will go hungry.
- d) Currency Exchange: Your goal is to exchange currency to make a profit. If you charge more than a few Eyas above market rates, you run the risk of the government arresting you. [On Day 2 and later currency exchange goal should also have the following (But not on Day 1): At the end of each day, you always convert all your Eyas into USD (i.e., you want to hold USD overnight).]

After the Day 1 Instructions are handed out, the instructor should announce the following: In a moment, we will ask the Hawk Households to leave the room and remain outside until we come and get you. You may talk among your group to determine a strategy but do not discuss with any of the other household groups please. While the households are outside, the groceries will be purchasing flour from the importer of flour (as Hawkville imports all of its flour). The flour must be purchased by the groceries using USD but will be priced in both Eyas and USD in the stores. The households should make sure to shop around to get the best price and consider both the price in Eyas and in USD when making your purchase decision. Groceries can obtain USD at the Hawkville Federal Bank and the

⁶ The group’s goal is provided to each group only – print each on separate sheet and on the top of each of the day’s instructions.

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currency exchanges who are able to exchange Eyas for dollars and dollars for Eyas (although market prices and availability will vary). Households can only use the currency exchanges as it is technically illegal for individuals to use USD for purchases.

II. Day 1 Instructions⁷

A. Hawkville Federal Bank (INSTRUCTOR) On Day 1, you will exchange USD to all grocery stores at the exchange rate of 5 Eyas = \$1.00. It is preferred to exchange currency and then immediately sell flour to the grocery store.

B. Hawk Grocery store

Grocery Stores currently have no packages of flour and receive 90 Eyas in cash for the day's transactions. [The instructor should have 90 Eyas attached to the instructions for each grocery store.] Purchase as much flour as you can from your foreign supplier (the instructor). You must first obtain dollars to purchase your flour inventory because your foreign supplier only accepts dollars. You might want to check both the bank and the currency exchanges to get the best price. After purchasing the flour, set your prices in whole Eyas and U.S. dollars (i.e., \$x.00) so you make some profit. Write down your prices and leave them hidden until the instructor asks you to display your prices. Your customers are expecting a package of flour to cost \$4 and somewhere between 22 – 28 Eyas with 25 Eyas being a "normal" price. You know that households budget for flour based on the expected price range and they are very price sensitive so staying within the suggested price range is strongly recommended. Once your prices are set they are fixed and cannot be changed until the next day.

C. Currency Exchange

Currency Exchanges will start with \$20 and 100 Eyas. [The instructor should have \$20 in \$1 bills and 100 Eyas attached to the Instructions for each currency exchange.] You have an ask price (what you will sell USD for in Eyas) for USD of 6 Eyas = \$1.00 and a bid price (what you will buy USD and provide back in Eyas) of 4 Eyas = \$1.00. These prices are set based on today's market exchange rate. Write down these prices and leave them hidden until the instructor asks you to display your prices. These exchange rates cannot be changed for the entire day.

D. Households living in Hawkville

Households have 100 Eyas to spend on flour. [The instructor should have 100 Eyas attached to the Instructions for each household.] You always shop around at the grocery stores to purchase flour for as little as possible as money is very tight. Check to see if the price is better in Eyas or USD. If you want to buy in dollars, you will need to exchange your Eyas at the currency exchange. Do it quietly as it is technically illegal for private citizens to exchange Eyas for USD. Your family will be very happy if you can spend less than your budget on flour as the rest can go toward other food or be saved for a rainy day (i.e., do not purchase more than 3 bags of flour).

III. Day 1 Instructors Notes: Equilibrium

Day 1 is expected to work smoothly with the households buying all of the flour they need and with money left over. The price for flour should be roughly the same at each grocery. Households should purchase flour in dollars if the price is greater than 24 Eyas but will still be able to meet their goal if they decide to use Eyas instead. The groceries should sell about 3 packages of flour each and end up with more money overall than they started with.

I. ⁷ Print out the instructions on a separate sheet of paper for each team.

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Hawksville Federal Bank supplies enough USD for the economy to work smoothly. The currency exchanges should have some business if flour prices are greater than 24 Eyas (but might not if the households do not realize that purchasing in USD would be cheaper).

The instructor should note on a separate piece of paper (see Table I) the following information: how many packages of flour each household purchased, the purchase price and the prices of the flour in Eyas and USD in each grocery and the exchange rates for each private exchange.

Have each household team announce how much flour they purchased and at what cost. How was the household's experience purchasing flour? Did anyone purchase flour using USD? Why or why not? Make sure to point out how it would be cheaper to buy in USD if any store had a price for flour greater than 24 Eyas. How do you feel about the peg? **Write down the results of Day 1 in the summary chart.** The summary chart will be used at the end of the exercise to show the level of inflation in the economy each day. Then ask each of the other teams to announce their results as follows:

Grocery stores: How did each store set prices? How much flour did they sell? Were they successful or not successful in selling flour? Why or Why not? How did the peg impact their pricing? How worried are the groceries about currency risk? Is the peg good for business?
Currency exchanges: How did you set prices? Have them explain the bid / asked spread. Did they have any business? Why or why not?

Overall: What is the general feeling about the economy in Hawksville? Who supports having the peg in place?

At the end of day 1, let the currency exchanges keep their dollars and Eyas but the groceries and households must return all money and flour to the instructor (i.e., we will assume that the money was spent on other goods and the flour was consumed). The USD will be used again by Hawksville Federal Bank and the Eyas can be set aside.

IV. Day 2 – The Eya Depreciates

After the day is reset, the teacher reads the following to the class: The economy is slowing down and Hawksville may be in a recession. In overseas markets, the Eyas has depreciated against the U.S. dollar with a reported market rate equal to 7 Eyas = \$1.00. The government has said the economy is fine and the official pegged rate in Hawksville remains in place at 5 Eyas = \$1.00. Teams, your goals remain the same.

Here are the Day 2 Instructions⁸. Households, please leave the room. I will call you back to purchase flour when the businesses are ready. All teams should keep the instructions private to your team only.

A. Day 2 Instructions to be Given Separately to Each Team⁹

- a) Hawksville Federal Bank (INSTRUCTOR) - The government mandated peg of 5 Eyas = \$1.00 still remains in place. However, you are running low on USD currency reserves and only have \$30 of USD in reserve. You MUST maintain a minimum of

⁸ Hand out instructions to each team separately. Remind each team to keep track of all transactions they make on a piece of paper as the information will be needed at the end of the day.

⁹ Instructions should be printed out separately for each team with the goals at the top:

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- \$6 in reserve at all times so you can only exchange \$24 of currency with the grocery stores. All transactions must be at the official peg rate of 5 Eyas = \$1.00. Exchange USD for Eyas to the grocery stores on a “first-come, first-served basis” until you only have \$6 left. After that, you will have to turn customers away. Additionally, do not let any currency exchanges charge more than 15 Eyas = \$1.00.
- b) Hawk Grocery Store
Grocery stores currently have no packages of flour and 90 Eyas in cash. [The instructor should have 90 Eyas attached to the instructions for each grocery store.] You hear that it may be difficult to get as many dollars as you need from Hawkville Federal Bank. You still want to purchase as many packages of flour as possible so you may need to go to the Currency Exchanges if you cannot get all of the USD you need at Hawkville Federal Bank. After you obtain USD, use them to purchase flour from your foreign supplier (the instructor). You must set the price for flour in Eyas and in whole U.S. dollars (i.e., \$x.00) so you make some profit. You want to keep prices as reasonable as you can since the customers are your neighbors and friends. Once your prices are set they cannot be changed for the entire day. Be careful of raising prices too much as consumers will shop around to get the best price.
- c) Currency Exchange – If you run out of USD at any time, you have a foreign source (the instructor) who will sell you USD at 8 Eyas = \$1.00. Set your bid / asked exchange rates for USD based on your current cost for USD (i.e., 8 Eyas = \$1.00). You need to be reasonable in your profit objective or people will complain and the police might stop by – you do not want that to happen! Once your exchange rates are set, they are fixed and cannot be changed for the entire day. At the end of the day, exchange all of your Eyas for USD with your foreign supplier (at 8 Eyas = \$1.00). You don't want to hold Eyas overnight.
- d) Households Living in Hawkville – You have 100 Eyas to spend on flour. [The instructor should have 100 Eyas attached to the Instructions for each household.] You always shop around at the grocery stores to purchase flour for as little as possible as money is very tight. If you want to buy in dollars, you will need to exchange your Eyas at the currency exchange. Do it quietly as it is technically illegal for private citizens to exchange Eyas for USD. Your family will be very happy if you can spend less than your budget on flour as the rest can go toward other goods or savings (i.e., do not purchase more than 3 bags of flour).

B. Day 2 Instructors Notes: Depreciation

Day 2 throws a shock into the economy with a depreciation of the Eyas and the Hawk Fed not having enough USD to supply all of the grocery stores. The grocery stores can purchase enough flour for the economy in total but must use the currency exchanges to gain additional USD. The grocery stores not lucky enough to get all their USD from Hawkville Federal Bank will have to raise prices due to the higher cost to obtain USD from the currency exchanges. The overall inflation rate should be a bit less than the level of depreciation in the market rate of the Eyas as the grocery stores who received currency at the pegged rate should not raise prices. The increased prices will hurt as some households will not have enough money to purchase their goal of three bags of flour.

Start with the grocery stores: Did you raise prices? If so, why? How much flour did you sell? Are you upset with anyone in the economy? If so, who? Does this experience lead to changes in your behavior for tomorrow? Did the peg protect you against currency risk? Why or why not?

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Then ask each household team announce how much flour they purchased and at what cost. Write the values on the board and on the summary chart. Did anyone purchase flour using USD? Why or why not? Compute the average price of flour for the class and the inflation rate from the prior day. Ask the households, who do you blame for the increase in flour prices? Also ask if today's shopping experience changes their behavior when they shop tomorrow.

Currency Exchanges: What happened to the value of the USD you held onto from Day 1 in terms of Eyas? Why? Who did you exchange currency with? How will today's experience impact how you act tomorrow?

Class in total: What is the overall feeling about the economy in Hawkville? How should the government feel about the peg? Is it working? Why or why not? What steps could the government do to possibly help the situation? What should the government say to the people of Hawkville?

At the end of the day, the currency exchange can keep its USD and Eyas but all other money and the flour should be returned to the instructor. The instructor should note all of the purchases, prices and rates on the summary sheet.

V. Day 3 – Crisis in Hawkville

The Instructor reads the following to the class: It is generally believed that the Eyas is greatly overvalued at the peg rate of 5 Eyas = \$1.00. The Eyas has significantly depreciated as the overseas market exchange rate is now 17 Eyas = \$1.00. The government is concerned about inflation and has announced they will arrest any sellers of flour who are “profiteering” from the difficulties in the economy. The government also stated that the depreciation in the Eya is due to “foreign entities who want to hurt Hawkville’s citizens” and emphasized the 5 Eyas = \$1.00 peg remains the official exchange rate in Hawkville. Again, please remember to write down the details of every transaction you make.

A. Day 3 Instructions to be Given Separately to Each Team:

- a) Hawkville Federal Bank (INSTRUCTOR) - You are running very low on USD currency reserves and only have \$15 in global currency reserves. You can exchange all of the USD you have for Eyas. The office of the president of Hawkville has ordered you to only exchange with Grocery #3 (who should have an official permit as shown in Figure 1). Everyone else who asks must be turned away. Also, do not let the currency exchange charge more than 25 Eyas = \$1.00.
- b) Hawk Grocery Store [give to all groceries except Grocery #3] – You currently have no packages of flour and 90 Eyas in cash. [The instructor should have 90 Eyas attached to the instructions for each grocery store.] You have seen the recent government announcements that people unfairly profiting from the country's difficulties will be arrested. You know they mean business as last night you saw a grocery store owner on TV in handcuffs. You will do whatever you can to get USD and buy flour so you don't go out of business and because the households are counting on you for food. Remember to set prices for flour in Eyas and in whole U.S. dollars (i.e., \$x.00). Again, once your prices are set they cannot be changed for the entire day.
- c) Hawk Grocery Store (Grocery store #3 ONLY) – You currently have no packages of flour and 90 Eyas in cash. [The instructor should have 90 Eyas and an official permit to purchase USD at the pegged rate (see Figure 1) attached to the instructions for each

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- grocery store.] Recently, it has been very difficult to obtain USD. You have seen the recent government announcements that people unfairly profiting from the country's difficulties will be arrested. A government official stopped by the store yesterday and gave you an offer you could not refuse: You will be able to use the attached permit to obtain \$15 at the official exchange rate but in exchange you have to price each package of flour in your store at 20 Eyas, cannot accept USD as payment and can only sell to people with an official permit. Only one household will have an official permit. You cannot sell flour to anyone else at any price – the police are watching!
- d) Currency Exchange – The demand for USD is tremendous! However, the police have been cracking down on currency exchanges and throwing several of your competitors in jail. You are concerned for your safety but you decide to stay in business because there is good money to be made. Luckily for you, you have access to a secret foreign supplier of USD (the instructor) who will give you as many USD as you want at 18 Eyas = \$1.00 whenever you need USD. You decide it is too risky to post an exchange rate and will negotiate with your customers on a case-by-case basis. Your goal is to make as many trades as possible but not get reported by the households to the police! Be careful about charging too much as any customer complaints will put you in jail! Make as many trades as you can and then move totally back into USD (through your secret supplier of USD) at the end of the day.
- e) Households living in Hawkville (all households except Household #4) – You have 100 Eyas to spend on flour. [The instructor should have 100 Eyas attached to the instructions for each household.] You have seen reports on TV of long lines and riots outside of stores where people are trying to get flour. You have heard that you might be able to get a better price for flour if you have USD. You will try to get flour from a grocery but will buy flour wherever you can find it (including from other households if they have extra) if you can afford it. You know that the government is cracking down on speculators so if the Currency Exchange or anyone else is not dealing with you fairly, you should threaten to tell the police on them. Note that it's going to be expensive to get USD at the currency exchange and will definitely be more than the market price of 17 Eyas = \$1.00. At the end of the day, you will be able to keep all of the money (both USD and Eyas) you have in your possession to use tomorrow.
- f) Household #4 – You have 100 Eyas to spend on flour. [The instructor should have 100 Eyas attached to the instructions for each household and an official permit letter (see Figure 2) allowing the holder to shop at Grocery #3.] You have seen reports on TV of long lines and riots outside of stores where people are trying to get flour. You have a good friend in the government who has told you she can help you purchase flour at normal prices. She gave you the attached permit allowing you to purchase flour at regular prices but the permit is only valid at Grocery #3. You know this is a special privilege that other households do not have – so keep this very quiet! Money is very tight and you need as much money as you can get. Therefore, you have decided to purchase all the flour you can (i.e., you should buy more than 3 packages of flour today) at Grocery #3 and resell any leftover flour to other households to get extra money. Because the Eya has been so unstable, you decide to only accept USD for any extra flour you sell. If you have extra flour, talk with the other households to see if they are interested in buying it for USD. You can price the flour however you like but remember that the police are cracking down on the black market and you don't want any of the other households turning you in to the police (you might want to get some idea of market prices from the other grocery stores). You have to decide

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how many packages of flour to keep for your own use (remember your goal) but you cannot keep more than three bags.

B. Day 3 Instructors Notes: Crisis

In Day 3 the economy is barely working. The government has implemented a “preference” system where certain stores and people in favor can shop at “normal” prices but everyone else is on their own. There will be shortages as the grocery stores (other than the “state” store) cannot get enough USD to purchase enough flour for everyone to have enough. The shortages create a black market in flour. The inflation rate is extreme as people will pay as much as it takes to get even 1 package of flour. Many households will find that they can find better prices for flour in USD than in Eyas.

Start with Grocery Store #3 and ask them to explain to the class how they obtained USD to purchase their inventory of flour. Why did they only sell to Household #4? How did they feel about the situation?

All other Grocery Stores: How did you set your prices in Eyas and USD for flour? How much flour did you sell and in what currency? How did you feel about the process? How do you feel about the government?

Then ask Household #4 to explain to the class how they purchased flour and what price they paid for the flour. How many packages of flour did they buy? Why did they buy that much? What did they do with the extra flour they obtained? How did they determine the resale price for the flour? Why would they want to obtain USD instead of Eyas? How did they feel about the overall situation?

Have the other households announce how much flour they purchased, who they bought it from and at what cost. Does their family have enough to eat? Did anyone purchase flour using USD? How do they feel about the situation? Who do they blame? Compute the average market price of flour (exclude the preference priced flour) using the market exchange rate for Eyas if purchased in USD and compute the level of inflation. After the calculation is done, ask the households as a group how they feel about Household #4 and the entire process of purchasing flour. Make sure the class understands why the black market occurred and how the government created a “state store” and used the permit to advantage people who are friends of the government

Currency Exchanges: What happened to the value of the USD you held overnight? This time you negotiated prices for USD. Describe how the negotiations went with your customers. What was the average actual exchange rate received?

Class in total: What is the overall feeling about the economy of Hawkville? Who do you blame for the problems? Is anyone acting maliciously? If so who? Is the peg relevant anymore? Why or why not? What steps could the government take to possibly help the situation? What should the government say to the people of Hawkville?

This ends the class exercise. Collect all of the money, Eyas and packages of flour. Make sure all of the values are captured on the summary charts. Discuss the outside reading assignments as described below about Venezuela and note the similarities or differences from the simulation. After the discussion is finished, the optional quiz can be administered.

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VI. Current Article Reading Assignment¹⁰

- A. Discuss what happened in the beer shortage article.
- B. Make sure to note that Polar has to gain approval from the government to receive USD to purchase their supplies. How does this impact their business and their employees?
- C. What are the similarities to the beer shortage and what happened in Hawkville?
- D. Why are people lining up for goods so early in the morning in Venezuela?
- E. Why would people pay money for a good place in line?
- F. Did this situation occur in Hawkville? What are the similarities?
- G. Discuss the daily routine in the “My Venezuela Nightmare” article. How would this impact a person’s work day and life in general? What is the real cost of such food insecurity? How does the woman feel about the government doing its job?

VII. Optional Example In class Quiz: (15 minutes) / 10 points each for a total of 100 points.

1. Why did the Hawkville government initially institute a pegged exchange rate of the Eyas to the USD?
2. How did the depreciation in the Eyas against the USD impact the price of flour in Hawkville? Explain why this impact occurred.
3. Explain why the lack of foreign currency in Hawkville led to shortages of flour.
4. How is a lack of foreign currency impacting Venezuela?
5. What is the role of the private currency exchange / black market exchange rate in the economy?
6. Why was it beneficial to hold USD in Hawkville when there was a depreciation in the Eyas?
7. Why does a black market for food exist in Venezuela?
8. In your opinion, did the pegged exchange rate work in Hawkville? Explain why or why not.
9. What could be changed about the simulation to make it better?
10. What was your favorite part of the simulation?

¹⁰ Note we used the current articles noted in the beginning of the case and also in the reference section below and have the following questions that relate to the simulation. The instructor may choose to replace these with other current examples.

Appendix

Table 1: Summary Table for the Class Exercise:

This table is to be used by the Instructor at the end of each day to record all the transactions that have occurred in the class
 Date of Class Exercise: _____ Class: _____

	Day 1 Price in Eyas	Day 1 Price in USD	Day 2 Price in Eyas	Day 2 Price in USD	Day 3 Price in Eyas	Day 3 Price in USD
Grocery #1						
Grocery #2						
Grocery #3						
	# Purchased	Price	# Purchased	Price	# Purchased	Price
Household #1						
Household #2						
Household #3						
Household #4						
Household #5						
Average Price						
	Bid Price	Asked Price	Bid Price	Asked Price	Bid Price	Asked Price
Currency Ex #1						
Currency Ex #2						

Case Study Series

Table II: Grocery Store Sales Summary Sheet.

This sheet is to be used by the grocery stores to track all their transactions for each day. Grocery Stores should have customers line up before selling any flour. All sales must be on a first come-first served basis and every sale must be paid for immediately in cash. If a household does not have the cash immediately, they need to go to the back of the line

Grocery Store Sales Summary

GROCERY STORE #

Sales of Flour	Day 1 Price in Eyas	Day 1 Price in USD	Day 2 Price in Eyas	Day 2 Price in USD	Day 3 Price in Eyas	Day 3 Price in USD
Bags of Flour Purchased						
Total Price of Flour in Eyas						
Total Bags of Flour Sold						
Total Eyas Received						
Total USD Received						
Total Sales (in Eyas) Convert USD to Eyas at Market Conversion Rate						
Average Price in Eyas						

Table III: Household Transaction Summary Sheet:

This table is for all the households to record their purchases. Households will follow these transaction rules: Sales of flour will be on a first come-first served basis and must be paid for immediately in cash. You cannot hold a place in line for others. If you cannot pay immediately, you must go to the back of the line.

Household Purchase Summary

HOUSEHOLD #

Flour Purchases	Day 1 Price in Eyas	Day 1 Price in USD	Day 2 Price in Eyas	Day 2 Price in USD	Day 3 Price in Eyas	Day 3 Price in USD
Bag of Flour 1						
Bag of Flour 2						
Bag of Flour 3						
Average Price in Eyas						

Case Study Series

Table IV: Currency Exchange Transaction Summary Sheet:

This table is to register all the currency exchange transactions that occur each day. The exchange should have customers line up before exchanging any currency / all exchanges are on a first come-first served basis

Currency Exchange Summary

CURRENCY EXCHANGE #

Sales of Flour	Day 1 Eyas	Day 1 USD	Day 2 Eyas	Day 2 USD	Day 3 Eyas	Day 3 USD
Transaction #1						
Transaction #2						
Transaction #3						
Transaction #4						
Transaction #5						
Transaction #6						
Transaction #7						
Transaction #8						
Transaction #9						

Case Study Series

Figure 1: Government Permit to Purchase Eyas
GOVERNMENT OF HAWKVILLE
PERMIT NUMBER: #HV197052
OFFICE OF THE PRESIDENT

PERMIT

This permit allows the holder to purchase U.S. dollars from the Hawkville Federal Bank at the official exchange rate of 5 Eyas = \$1.00.

THIS PERMIT IS GOOD FOR DAY 3 ONLY.

ADMINISTRATOR: Hawkville Government

NOTICE

This permit allows the bearer to purchase as much as \$15 at the official rate of 5 Eyas = \$1.00. Permit must be provided to the Hawkville Federal Bank at time of purchase and can only be used once. NON-TRANSFERABLE AND HAS NO CASH VALUE.

Figure 2: Government Permit to Purchase Flour

GOVERNMENT OF HAWKVILLE

PERMIT NUMBER: #HV92743

OFFICE OF THE PRESIDENT

FLOUR PERMIT

This permit is authorized only to Household #4. Must be presented upon purchasing flour products.

THIS PERMIT IS GOOD FOR DAY 3 ONLY.

ADMINISTRATOR: Hawkville Government

APPLICANT: Household #4

NOTICE

This permit allows the bearer to purchase flour at the price of 20 Eyas. There are no limit to the number of packages of flour that can be purchased. Only valid at Grocery Store #3 on Day 3. Permit must be provided to store owner at time of purchase and can only be used once. NON-TRANSFERABLE AND HAS NO CASH VALUE.

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Authors

Todd Erkis, FSA, CERA, MAAA

Visiting Professor, Finance Department, Saint Joseph's University, Philadelphia,
terkis@sju.edu

Karen Hogan, PhD*

Chair and Professor, Finance Department, Saint Joseph's University, Philadelphia,
hogan@sju.edu

*Corresponding Author