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Applied Project

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Executive Summary: Doctor of Professional Practice Applied Project

Navigating Structural Vulnerabilities in Small Open Economies: Eight Interconnected Case Studies from Jamaica and Trinidad and Tobago

This doctoral applied project examines how financial and policy decisions are made under conditions of uncertainty and structural constraint in small open economies. Using a qualitative, multi-case design, the study develops and analyzes eight interconnected teaching cases, seven based in Jamaica and one in Trinidad and Tobago, to explore how macro-financial vulnerabilities emerge, propagate, and are managed.

The project is motivated by a gap between traditional finance theory and the realities of small open economies. Most financial frameworks are developed in large, deep markets and rely on assumptions that do not consistently hold in environments characterized by shallow markets, limited policy space, and high exposure to external shocks. This disconnect is also reflected in teaching, where there is a shortage of contextually relevant case materials, particularly in the Caribbean.

The study adopts a qualitative, library-based methodology using publicly available data. The unit of analysis is the decision made under constraint, with emphasis placed on decision logic rather than outcomes. Cross-case synthesis identifies recurring patterns across four decision environments: external shock exposure, financial system transmission, market response and investor decision-making, and policy and institutional response.

A key contribution is the development of a systemic integration framework that maps these environments onto three interacting layers (outer, middle, and inner), demonstrating that vulnerability is both distributed and transmitted across the system. Shocks do not remain localized; they propagate across layers, transforming into broader macro-financial challenges.

The findings show that small open economies are structurally distinct from large, developed economies. With limited buffers and constrained policy space, shocks are amplified rather than absorbed.

The project contributes to theory by introducing a system-based view of vulnerability, to practice by offering a structured way to evaluate decisions under constraint, and to teaching by providing flexible, contextually relevant cases that can be used individually or as an integrated system.

A Currency at the Crossroads

Trinidad & Tobago's Devaluation Dilemma

Teaching Note

Synopsis

This teaching note accompanies the case 'A Currency at the Crossroads: Trinidad & Tobago's Devaluation Dilemma', which examines the debate over whether Trinidad & Tobago should devalue its currency from TT\$6.79 to TT\$9 per US dollar. The case situates students in the role of Minister of Finance Davendranath Tancoo, who must balance competing advice from economists, the risks of inflation from devaluation, the implications for public debt, and the demands of businesses struggling with foreign-exchange shortages. Students apply the concepts of exchange rate pass-through, price elasticity of demand, and the J-curve effect; analyze fiscal impacts; and debate the benefits and distributional consequences of devaluation. They also compare Trinidad & Tobago's current dilemma with Argentina's currency crisis in 2001 to understand the nuances of both situations and extrapolate key takeaways. The case blends theory with contemporary policy debates in small developing states.

Intended Audience, Recommended Courses, and Placement

This case is intended for graduate-level students in International Finance, Macroeconomics, and Emerging Market Strategy. It is suitable for use in MBA, MSc Finance, and Executive Education programs. The case also works well as part of modules on exchange rate regimes, risk management, and Caribbean economic development. It can also serve in Political Economy or Public Policy courses examining small-state vulnerabilities.

Learning Objectives

By the end of the case discussion, students should be able to:

1. Apply the theory of exchange rate pass-through and price elasticity to understand the consequences of devaluation.
2. Apply the framework of the J-curve to explain trade balance dynamics following devaluation.
3. Analyze the impact of devaluation on external public debt and fiscal sustainability.
4. Evaluate the distributional and welfare consequences of currency adjustment.
5. Identify key similarities and distinctions between Trinidad & Tobago's current dilemma and Argentina's currency board collapse in 2001.
6. Understand the trade-off a nation must make between a fixed exchange rate, monetary independence, and freedom of capital movements (the impossible trinity)

Case Questions

1. How does the theory of exchange rate pass-through help explain the risks of devaluation in Trinidad & Tobago? Which goods would likely see a complete vs. a partial pass-through?
2. Using the J-curve effect as the theoretical framework, explain the likely short-term and long-term impact of devaluation on Trinidad and Tobago's trade balance.
3. Using the information in the case, quantify the financial impact of devaluation on public debt (both principal and interest) if the exchange rate moved from TT 6.79/ USD to TT 9/ USD.
4. Who bears the greatest burden of inflation, and what cushioning measures could mitigate the impact if devaluation occurred?
5. Compare Argentina's collapse with Trinidad's current dilemma. What are the key similarities, differences, and lessons that can be learned?

6. How does the Impossible Trinity help us understand why no perfect solution exists for Trinidad?

7. Should Minister Tancoo devalue the Trinidad and Tobago dollar? Why or why not?

Teaching Plan / Outline

A suggested teaching plan for a 90-minute session could be prepared as follows:

Activity	Time
Discuss the country context. Ask "why is there a crisis?" "What are the competing concerns?"	5 minutes
Discuss pass-through and elasticity by asking "Which prices move immediately when a currency is devalued?"	10 minutes
Discuss the concept of the J-Curve and explain how trade responds to devaluation	15 minutes
Analyze and discuss the impact of devaluation of the value of debt and interest cost in TT dollars "How does devaluation affect the budget?" "What are the implications for Trinidad and Tobago's credit risk premium on sovereign debt?"	15 minutes
Discuss the implications of devaluation on Trinidad's most vulnerable population	5 minutes
Review and discuss the collapse of Argentina's currency. What are the similarities? What lessons can Trinidad and Tobago learn? Could a sharp devaluation of the TT dollar trigger speculative spirals, as in Argentina?	15 minutes
Discuss the options available within the framework of the impossible trinity. Ask why no perfect solution exists for Trinidad & Tobago	10 minutes
Ask the class if Minister Tancoo should "devalue or not?" and create three groups based on "yes", "no" or "unsure" responses. Have the students debate both sides and have the unsure group choose a winner	10 minutes
Summarize lessons learned	5 minutes
Total	90 minutes

Initial Anchoring Activity Before Country Context Discussion

Everyday Currency Shock Exercise.

Ask students to imagine that a new iPhone costs US\$1,000. At the current exchange rate of TT\$6.79/USD, the price would be about TT\$6,790. Now ask: "What happens if the TT dollar suddenly moves to TT\$9 per USD?" Have students quickly calculate the new price (TT\$9,000). Then ask: "Who feels the impact of the price change, the

consumer or the retailer?” Note that this is a luxury good; the answer, therefore, depends on how much the retail price increases due to the devaluation of the exchange rate, which in turn depends on how much the retailer absorbs and how much he passes on to the consumer.

Next ask: “Would the quantity demanded rise, fall, or remain the same?” This, of course, depends on the price elasticity of demand for iPhones. Follow up with: “Would all prices in Trinidad rise this much?” This should prompt students to consider the effects of devaluation on essential versus luxury goods.

Use the responses to introduce inflation (increased price of the iPhone), exchange rate pass-through (the new price of TT\$9,000 represents 100% or full pass-through), and elasticity (the price increase of different goods and services will vary based on their elasticity of demand), which will naturally lead into the structured discussion of the case.

This short exercise helps students immediately understand:

- Pass-through – imported goods rise quickly in local currency.
- Purchasing power effects – consumers feel the impact immediately.
- Elasticity – there are some goods people still buy despite higher prices.
- Real-world intuition – students see the issue before discussing theory.

It also sets up the next discussion step perfectly:

“Now imagine that this price change is happening across an entire economy like Trinidad & Tobago. Why might policymakers hesitate before allowing the currency to depreciate?” This transitions directly into your first planned activity:

Discuss the country context: Why is there a crisis? What are the competing concerns?

Household Budget Analogy.

Ask students: *“Imagine your household earns most of its income from one job. Suddenly, that job becomes unstable, but you still have large bills to pay every month. What choices do you face?”* Students typically respond: “cut spending”, “borrow”, or “find new income”. Next, ask the students: *“How does having an unstable income affect any savings you may have put aside?”* Students typically respond: “The savings will be depleted”.

Then connect this to Trinidad’s economy, which is heavily dependent on energy exports and has limited diversification, creating vulnerability when foreign exchange earnings fall. Combined with its heavy reliance on imports, this creates greater demand for US dollars relative to the volatile supply from energy exports, in turn causing severe foreign exchange shortages and placing pressure on foreign exchange reserves and, by extension, the exchange rate.

Discussion Questions & Answers

How does the theory of exchange rate pass-through help explain the risks of devaluation in Trinidad & Tobago? Which goods would likely see a complete vs. a partial pass-through?

Exchange rate pass-through refers to the extent to which changes in the exchange rate are reflected in domestic prices of imported and exported goods. In theory, a depreciation of the domestic currency raises the local-currency price of imports and lowers the foreign-currency price of exports. However, empirical evidence, notably in small, import-dependent economies, suggests that pass-through is often partial, uneven, and sector-specific, rather than complete.

In Trinidad & Tobago (T&T), the risks of devaluation are magnified by the composition of imports. Goods such as food, fuel, medicine, medical supplies, machinery, and spare parts are largely imported, often invoiced in U.S. dollars, and characterized by relatively inelastic demand. For these categories, pass-through is likely to be high or near 100%, meaning that a depreciation of the TT dollar would translate rapidly into higher consumer prices. Importers have limited scope to absorb exchange-rate losses in margins, and consumers cannot easily substitute away from these essentials. As a result, inflationary effects would be swift and broad-based.

By contrast, discretionary consumer goods, such as electronics, vehicles, or luxury items, may experience partial pass-through. Importers may attempt to delay price increases, draw down inventories purchased at earlier exchange rates, or compress margins to preserve market share. Nevertheless, even in these segments, sustained depreciation would eventually feed through to prices once inventories are replenished.

Instructors may, at this juncture, create two columns on the board and based on students' responses, make a list of high-pass-through goods vs. partial-pass-through goods.

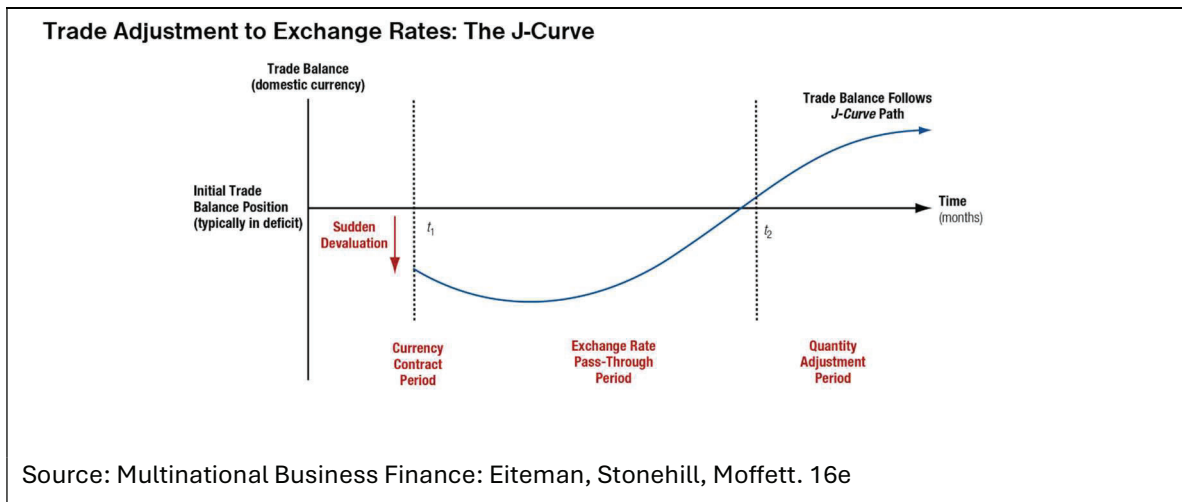
On the export side, the benefits of depreciation through improved price competitiveness are muted. Trinidad's dominant export sector, energy, is priced in U.S. dollars on global markets and operates under long-term contracts. As such, export volumes and prices are largely insensitive to exchange rate movements, limiting the positive pass-through effects that devaluation might otherwise generate. Non-energy exporters, meanwhile, rely heavily on imported inputs, so cost increases due to depreciation offset any gains from improved external competitiveness. Students will now see that the exchange rate pass-through theory helps explain why devaluation in T&T is asymmetrically risky: inflationary costs materialize quickly and broadly, while competitiveness gains are limited, delayed, or structurally

constrained. The result is a high probability of inflation without a commensurate improvement in external performance.

Using the J-curve effect as the theoretical framework, explain the likely short-term and long-term trade balance impact of devaluation.

Instructors may pause to ask students for their thoughts on what might happen to imports, exports, and Trinidad and Tobago's trade balance in the short run and the long run.

The J-curve effect describes the dynamic path of a country's trade balance following a currency depreciation. In the short run, the trade balance typically deteriorates before improving in the long run, assuming that export and import elasticities eventually respond.



In the short term, Trinidad & Tobago is highly likely to experience a worsening of the trade balance following devaluation. Import contracts are often denominated in foreign currency and fixed in the short run, while import volumes, especially for essentials, are relatively inelastic. As the TT dollar depreciates, the TT-dollar value of imports rises immediately, increasing the import bill even if quantities remain unchanged. Meanwhile, export volumes, especially in energy, do not respond quickly, as production capacity is fixed and contracts are long-term and

predetermined. In the longer term, the classic J-curve improvement depends critically on the price elasticity of demand for exports and imports.

For Trinidad & Tobago, this adjustment mechanism is weak. Energy exports cannot expand significantly in response to depreciation because production is constrained by capacity, investment cycles, and global demand conditions. Non-energy exports, while theoretically more responsive, face structural constraints such as limited scale, high import content, logistical bottlenecks, and weak integration into global value chains.

Import substitution is also limited. While higher import prices may incentivize local production over time, Trinidad's domestic economy lacks sufficient diversification in agriculture and manufacturing to quickly or at scale replace imported goods. As a result, even in the long run, the improvement in the trade balance is uncertain and likely modest.

Therefore, applying the J-curve framework suggests that short-term deterioration is highly likely, while long-term improvement is ambiguous and contingent on deep structural reforms, consistent with Minister Tancoo's beliefs. Without such reforms, devaluation risks locking the economy into the downward portion of the J-curve without ever realizing its upward swing.

Using the information in the case, quantify the financial impact of devaluation on public debt (both principal and interest) if the exchange rate moved from TT6.79/USD to TT9/USD.

Prior to beginning the analysis, instructors can ask students the following: "Imagine you borrow US\$10,000 while the exchange rate is TT6.80/USD. If the currency falls to TT9/USD, what happens to the amount you owe in your local currency?" Students quickly see that the debt becomes much larger. Then transition by saying: "Now

imagine this effect applied to billions of dollars of government debt.” This prepares students to begin analyzing the sovereign debt exhibit as shown below.

From the table, the total outstanding USD sovereign bonds are US\$5.92 billion, and the total annual interest payments are US\$315.265 million. All bonds are USD-denominated, mostly callable Eurobonds, with coupons ranging from approximately 4.5% to 6.4%.

Impact on Debt (Principal): At TT\$6.79 / USD

- TT-dollar value of debt:
 $\text{US\$5.92bn} \times 6.79 = \text{TT\$40.20 billion}$

Impact on Debt (Principal): At TT\$9.00 / USD

- TT-dollar value of debt:
 $\text{US\$5.92bn} \times 9.00 = \text{TT\$53.28 billion}$

The increase in TT-Dollar Debt is TT\$13.08 billion. No new borrowing occurs, yet the government’s reported debt stock jumps by over TT\$13 billion purely due to exchange-rate effects.

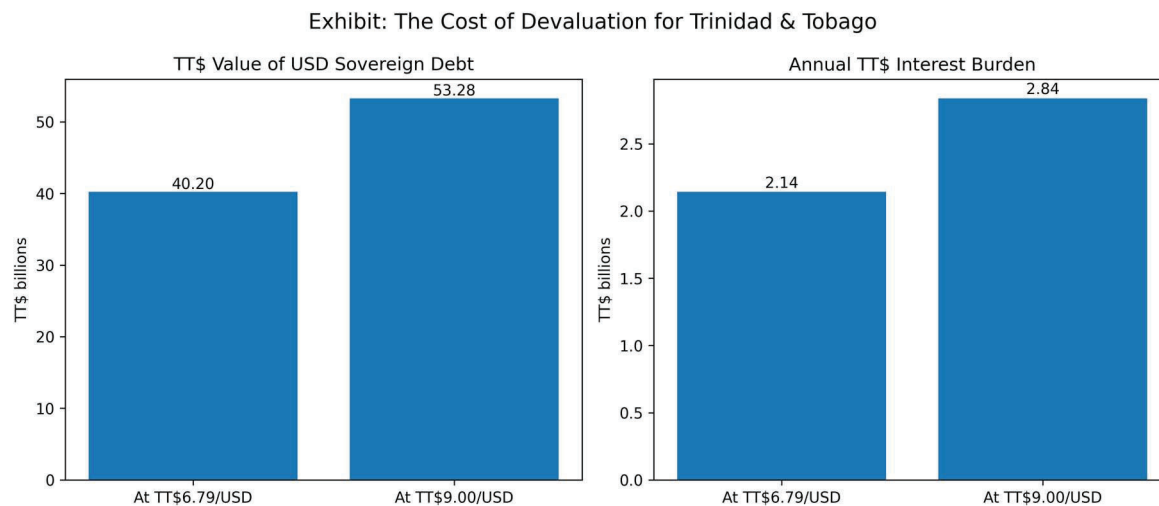
Impact on Annual Debt-Service (interest): At TT\$6.79 / USD

- Annual interest cost:
 $\text{US\$315.265m} \times 6.79 = \text{TT\$2.14 billion}$

Impact on Annual Debt-Service (interest): At TT\$9 / USD

- Annual interest cost:
 $\text{US\$315.265m} \times 9.00 = \text{TT\$2.84 billion}$

The resulting increase in the annual interest burden would be TT\$697 million. This increase is permanent as long as the debt remains outstanding and the exchange rate remains depreciated.



Fiscal Interpretation (for the Case)

A move from TT\$6.79 to TT\$9.00 would inflate the public debt by TT\$13.1 billion, worsening debt-to-GDP ratios overnight, raising annual debt-service costs by nearly TT\$700 million, crowding out social transfers, health and education spending, capital expenditure, or forcing higher taxes or borrowing.

This mechanical revaluation explains why economists such as Dr. Jamelia Harris emphasize that devaluation is not neutral for fiscal policy as it directly tightens the budget constraint even before inflation, wage pressures, or growth effects are considered. A devaluation to TT\$9 would not only change prices but also instantly add over TT\$13 billion to public debt and nearly TT\$700 million per year to interest costs, tightening fiscal space without creating a single new dollar of revenue.

Who bears the greatest burden of inflation, and what cushioning measures could mitigate the impact if devaluation occurred?

Instructors may ask students to share their thoughts on the type of goods bought by low-income households versus higher-income households. This could be linked to the previous discussion about which goods (luxury vs non-luxury) may see partial or full pass-through. This should reinforce the point that low-income households spend a disproportionate share of their income on essentials such as food, transport, and utilities, categories with high exchange-rate pass-through.

The burden of inflation resulting from devaluation in Trinidad & Tobago would fall most heavily on low-income households, pensioners, and public-sector workers, as their incomes are often fixed or adjusted with significant lags. Small and medium-sized enterprises (SMEs) would also be vulnerable, especially those reliant on imported inputs, and would face rising costs with limited pricing power, threatening profitability, employment, and business survival. These groups are highly exposed because they have limited ability to hedge against price increases, renegotiate incomes, or pass higher costs onto others.

Next, instructors could ask students to suggest ways that the government could cushion these effects. Students may suggest temporary subsidies or zero-rating of essential food items and medicines, targeted cash transfers to vulnerable households, and indexed social assistance programs. For SMEs, students may suggest that preferential access to foreign exchange for essential inputs, concessional credit facilities, or temporary tax relief could help prevent widespread closures.

Instructors may prompt students to consider the implications of their suggestions above by asking them how the government would fund these cushioning measures. This should highlight to students that such measures carry fiscal costs. In an environment where devaluation also raises the TT-dollar value of foreign debt

service, the government's capacity to sustain large-scale cushioning is constrained. Poorly targeted subsidies risk becoming permanent, distorting incentives and worsening fiscal sustainability.

Thus, while cushioning measures can soften the immediate social impact of inflation, they cannot fully neutralize it. The distributional consequences of devaluation highlight why inflation is not merely a macroeconomic variable but a political and social constraint on exchange-rate policy.

Compare Argentina's collapse with Trinidad's current dilemma. What are the key similarities, differences, and lessons that can be learned?

1. Nature of the Regime

- Argentina (1991–2001): Operated a currency board, a legally binding commitment to maintain a one-to-one peso-dollar peg, backed by dollar reserves. Monetary policy was effectively outsourced; Argentina could not adjust interest rates, nor could it expand the money supply without equivalent dollars.
- Trinidad & Tobago (2025): Operates a managed float/quasi-peg at approximately TT\$6.79/USD. The Central Bank intervenes to stabilize the rate but has more discretion than a currency board. While foreign exchange access is rationed and distortions persist, the system is not as rigid as Argentina's "hard peg."

Implication: T&T has more flexibility and less legal/institutional rigidity than Argentina's board.

2. Triggering External Shocks

- Argentina:
 - U.S. dollar strength in the 1990s made the peso overvalued.
 - Brazil's devaluation in 1999 worsened competitiveness.

- Persistent trade deficits and reserve depletion undermined the peg.
- Trinidad:
 - U.S. dollar stability has not created the same degree of misalignment.
 - The challenge stems instead from domestic foreign exchange illiquidity due to reliance on hydrocarbons and limited non-energy export diversification.
 - The parallel market premium reflects rationed supply, not an international mispricing shock of Argentina's scale.

Implication: Argentina's crisis was driven by external competitiveness shocks, T&T's by internal structural dependence on USD inflows.

3. Reserves and Debt Dynamics

- Argentina:
 - Reserves dwindled as the central bank defended the peg.
 - Public debt (much in dollars) ballooned, and the inability to devalue earlier worsened the eventual debt default.
- Trinidad:
 - Reserves are under pressure, but external public debt is moderate (approximately 20% of GDP).
 - A devaluation would raise TT-dollar debt servicing costs, but the scale of sovereign risk is not yet similar to the scale of Argentina's debt in magnitude.

Implication: Both face(d) reserve pressure, but Argentina was structurally overleveraged in dollar debt.

4. Capital Flight and Confidence

- Argentina: As credibility evaporated, residents dollarized their savings en masse. Capital flight accelerated the collapse, a classic self-fulfilling run.

- Trinidad: There is evidence of hoarding USD and black-market activity, but not yet the full-scale bank runs or systemic dollarization seen in Argentina.

Implication: Behavioral similarities exist, but the scale differs. Argentina's crisis was deep-rooted, while T&T's is destabilizing but contained.

5. Adjustment Capacity

- Argentina: Had no policy flexibility and was trapped by currency board rules. The only exit was the collapse of the exchange rate regime.
- Trinidad: Has options:
 - Maintain quasi-peg with rationing,
 - Gradually adjust via managed float,
 - Or undertake a large devaluation.
 - Complementary reforms (export diversification, SME support, fiscal prudence) remain feasible levers.

Implication: Trinidad retains policy space that Argentina had ceded.

6. Parallels and Lessons

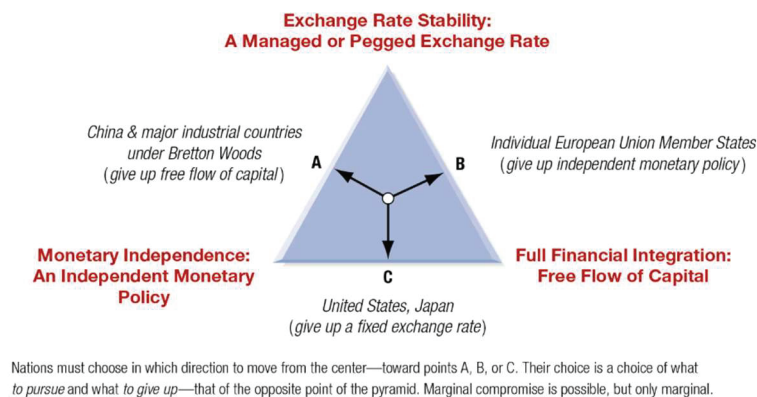
- Parallels:
 - Overvaluation risk when domestic structures don't align with fixed rates.
 - Reserves depletion and black-market growth as warning signals.
 - Distributional burdens (poor and SMEs are most vulnerable).
 - Political resistance to adjustment until the system breaks.
- Differences:
 - Trinidad's regime is not a hard currency board.
 - Debt exposure is milder, making default less likely.
 - Crisis is liquidity-driven rather than solvency-driven (Argentina faced both).
 - Trinidad can opt for gradualism; Argentina had no middle path.

Trinidad's crisis is not a mirror image of Argentina's collapse. Argentina's currency board was an extreme, rigid institutional arrangement that became unsustainable after global shocks and debt overhang. Trinidad's challenge is a foreign-exchange supply and distribution problem, rooted in its dependence on hydrocarbons and its lack of diversification. But the lesson from Argentina is that defending an increasingly misaligned rate for too long without adjustment can erode credibility, amplify costs, and make eventual correction far more painful.

How does the Impossible Trinity help us understand why no perfect solution exists for Trinidad?

Before beginning, the instructor could draw a triangle on the board with each point labeled: Exchange Rate Stability, Capital Mobility, and Monetary Independence. Ask students: "If you could only pick two of these, which would you choose?" Students vote and explain their reasoning, then connect the choices to Trinidad's situation as depicted in the discussion below.

The Impossible Trinity



Source: Multinational Business Finance: Eiteman, Stonehill, Moffett. 16e

The Impossible Trinity (or trilemma) posits that a country cannot simultaneously achieve exchange rate stability, monetary policy independence, and full capital mobility. Trinidad & Tobago's predicament illustrates this constraint vividly.

By maintaining a managed float that functions as an effective peg, T&T prioritizes exchange rate stability. This choice helps anchor inflation expectations and protect consumers from volatility, but it requires Central Bank intervention in the foreign exchange market and constrains monetary policy autonomy. Interest-rate decisions must remain broadly aligned with external conditions, specifically U.S. monetary policy, to prevent capital flight and reserve depletion.

At the same time, persistent FX rationing and administrative allocation indicate that full capital mobility has been sacrificed. Businesses face delays in accessing foreign exchange, trapped capital, and parallel-market premiums. This compromises investment confidence and economic efficiency.

If Trinidad were to allow a freer float, it could regain monetary independence and improve FX market clearing, but at the cost of exchange rate stability and higher inflation. Conversely, a harder peg or dollarization would enhance stability but eliminate monetary sovereignty entirely.

The trilemma thus explains why no perfect solution exists. Any policy choice necessarily involves trade-offs among inflation control, policy autonomy, and market efficiency. The challenge for policymakers is not to escape the trilemma, but to choose transparently which corner to prioritize and design complementary fiscal and structural policies that manage the resulting costs.

Should Minister Tancoo Devalue the TT Dollar? Why or Why not?

The instructor could conduct a cabinet simulation and tell students: "You are now the Minister's economic advisory council", then divide them into three camps: Devalue, Do Not Devalue, and Unsure. Each group could then get two minutes to prepare

arguments. The Unsure group acts as the cabinet committee, deciding which argument is most convincing. The debate might highlight some of the perspectives discussed below.

Based on the evidence in the case, a sharp, one-off devaluation appears difficult to justify. The inflationary risks are immediate and substantial, while the gains in export competitiveness are limited by structural realities. Devaluation would also raise the TT-dollar burden of foreign debt, narrow fiscal space, and potentially force austerity measures that exacerbate social hardship. Moreover, a sharp move risks destabilizing expectations, encouraging speculative behavior, and eroding policy credibility.

However, defending the peg indefinitely is also costly. Persistent FX shortages, parallel-market premiums, and constrained investment signal that the current regime is under strain. Over time, these distortions may undermine credibility and growth.

The dilemma is not whether to “solve” the trinity, but how to manage the trade-offs transparently to maintain credibility and protect vulnerable groups. Whether Minister Tancoo should devalue the TT dollar depends on the balance between short-term adjustment costs and long-term structural objectives.

A more defensible approach is a gradual, managed adjustment, combined with clear communication, targeted social protection, and structural reforms aimed at diversification and productivity. Such an approach recognizes the limits imposed by the Impossible Trinity while avoiding the shock effects of abrupt devaluation. In this sense, Tancoo’s reluctance to devalue outright reflects a rational assessment of the trade-offs rather than policy inertia. The key challenge is ensuring that gradualism is accompanied by credible reforms; otherwise, postponement may simply defer, rather than avoid, a more painful adjustment in the future.

Beyond Devaluation: Strategic Policy Pathways

While the case centers on the binary question of devaluation, policymakers in practice face a broader menu of strategic options. A managed transition could combine gradual exchange-rate adjustment with structural reforms to expand non-energy exports and reduce import dependence. Targeted foreign exchange auctions may improve allocation efficiency while preserving stability. Strengthening domestic production in agriculture and light manufacturing could mitigate long-term import exposure, although such adjustments require time and investment. Policymakers could also explore digital FX platforms to increase transparency and reduce parallel-market distortions. On the fiscal side, improving revenue diversification and strengthening sovereign wealth buffers could enhance resilience to commodity cycles. These approaches underscore that exchange-rate policy alone cannot resolve structural imbalances; instead, it must be embedded within a broader, forward-looking economic strategy.

Epilogue

As of early 2026, Trinidad & Tobago's government continues to defend the managed peg, while public debate intensifies over whether a controlled depreciation is inevitable. Businesses remain vocal about foreign exchange shortages, while policymakers emphasize the need for structural reforms. The outcome of this debate will shape the nation's economic trajectory and social contract for years to come.

Common Student Misconceptions

- Devaluation automatically improves the trade balance
- Export sectors respond immediately to price changes
- Inflation effects are uniform across income groups
- Exchange rate policy can solve structural economic issues independently

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative is grounded in Trinidad & Tobago's exchange rate dilemma, the underlying dynamics reflect recurring structural features that extend beyond any single country context.

High-Level Insights from the Case Series

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding Trinidad & Tobago's devaluation dilemma and explaining how financial vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points, including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures
- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations
- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best.

In contrast, developed economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

Although this case is situated in Trinidad & Tobago, its analytical relevance extends to other economies that share similar structural characteristics, including:

- Small or medium-sized open economies
- High dependence on a narrow export base (e.g., commodities)

- Significant reliance on imported goods
- Limited diversification and shallow domestic production capacity
- Constrained policy space due to external balance considerations

These characteristics are common across many Caribbean economies, as well as in selected countries in Africa and other emerging markets that face foreign exchange constraints and exchange rate management challenges. The case also provides a useful point of comparison with historical episodes such as Argentina's currency board collapse, which is referenced in the case narrative. While Trinidad & Tobago operates under a more flexible regime, the comparison highlights how prolonged misalignment, reserve depletion, and delayed adjustment can erode credibility and amplify the eventual cost of correction.

At the same time, the case should not be interpreted as universally generalizable across all economic contexts. In larger, more diversified economies with deeper capital markets, flexible exchange rate regimes, and broader production bases, the transmission of exchange rate adjustments may be more muted, and policy responses may be less constrained. Instead, this case offers analytical generalization, demonstrating how structural features, such as import dependence, export concentration, and limited policy flexibility, shape both the risks and the consequences of exchange rate adjustment.

In this context, the Trinidad & Tobago dilemma is not unique. It represents a broader class of policy problems in which decision-makers must choose among imperfect alternatives under constraints, in which the costs of both action and inaction are distributed unevenly across the economy and may only become fully visible over time.

Key Learning Points from Case Appendices F & G

Appendix F

Trinidad & Tobago External Trade Balance (2024 Estimates) (US\$ billions)

Item	Value (US\$ billions)	% of Total Trade	Notes
Exports of Goods	12.7	100%	Dominated by energy exports
Energy Exports (LNG,	10.3	81%	Natural gas, methanol, ammonia,
Non-Energy Exports	2.4	19%	Chemicals, manufactured goods, food
Imports of Goods	8.9	100%	Highly import-dependent economy
Food Imports	1.6	18%	Cereals, dairy, processed foods
Machinery & Transport	2.3	26%	Industrial equipment, vehicles
Manufactured Goods	2.1	24%	Consumer goods, electronics
Fuel & Industrial Inputs	1.4	16%	Energy inputs for industry
Other Imports	1.5	16%	Chemicals, plastics, miscellaneous
Trade Balance (Goods)	3.8	—	Surplus driven by energy exports

- Trinidad and Tobago runs a trade surplus primarily because of energy exports.
- Hydrocarbon products account for roughly four-fifths of export earnings, making the economy highly sensitive to commodity prices.
- The non-energy sector is relatively small but highly import-dependent, which is important when analyzing exchange-rate pass-through and inflation.
- Devaluation could raise the cost of imports significantly, such as food, machinery, and consumer goods

Composition of Trinidad & Tobago Energy Exports (2024 Approximate Annual Values)

Energy Export Product	Estimated Export Value (US\$ billions)	Share of Energy Exports	Key Export Markets
Liquefied Natural Gas	4.1	40%	Spain, UK, Latin America
Methanol	2.1	20%	United States, Europe
Ammonia	1.6	16%	United States, Brazil
Refined Petroleum	1.2	12%	Caribbean, Central America
Crude Oil	0.8	8%	United States
Other Petrochemicals	0.5	4%	United States, Latin America
Total Energy Exports	10.3	100%	—

- Natural gas-based products dominate the export sector, particularly LNG, methanol, and ammonia.
- The United States remains Trinidad & Tobago's largest trading partner, especially for petrochemicals and ammonia.
- Much of the energy sector is capital-intensive and linked to global commodity prices, meaning exchange-rate changes may have limited immediate effects on export volumes.
- The non-energy sector is relatively small, which complicates the argument that devaluation alone could dramatically improve export competitiveness.

Major Import Categories of Trinidad & Tobago (2024 Approximate Annual Values)

Import Category	Estimated Import Value (US\$ billions)	Share of Total Imports	Examples
Machinery & Transport	2.3	26%	Industrial machinery, vehicles,
Manufactured Goods	2.1	24%	Electronics, appliances, consumer
Food & Agricultural Products	1.6	18%	Cereals, dairy products, meat,
Fuel & Industrial Inputs	1.4	16%	Refined fuels, chemicals used in
Chemicals & Pharmaceuticals	0.8	9%	Medicines, plastics, fertilizers
Other Imports	0.7	7%	Miscellaneous consumer goods
Total Imports	8.9	100%	—

Trinidad and Tobago’s import basket is dominated by essential goods and production inputs, meaning that currency depreciation may quickly pass through into higher domestic prices, notably for food, transportation, and industrial inputs.

Appendix G

Top Export Markets for Trinidad & Tobago (2024 Approximate Shares of Total Exports)

Rank	Export Market	Estimated Share of Exports	Major Products Exported
1	United States	~39%	Ammonia, methanol, LNG, petroleum products
2	European Union	~16%	LNG, petrochemicals
3	CARICOM Countries	~12%	Refined fuels, manufactured goods
4	Latin America (Brazil, Colombia, etc.)	~10%	Ammonia, petrochemicals
5	Central America	~8%	Refined petroleum products
6	Asia	~7%	LNG and petrochemical products
7	Other Markets	~8%	Chemicals and industrial products
Total	—	100%	—

Trinidad & Tobago’s export markets are highly concentrated, distinctly in the United States and Europe, and dominated by energy products priced in global markets. Because these commodities are priced internationally in U.S. dollars, exchange-rate depreciation may not significantly increase export volumes in the short run, limiting one of the potential benefits of devaluation.

Macroeconomic Context Behind Trinidad & Tobago’s Foreign Exchange Shortage

Indicator	2020	2022	2024 (Approx.)	Interpretation
TT\$/USD Official Exchange Rate	~6.75	~6.79	~6.79	Exchange rate remained largely stable due to Central Bank management
Net Official Reserves (US\$ billions)	7	6.8	~5.4	Gradual decline in foreign exchange buffers
Energy Export Prices (Global Gas & Petrochemicals Index)	Low (pandemic)	High	Moderating	Export revenues fluctuate with global commodity prices
Energy Sector Share of Exports	~78%	~81%	~80%	Continued heavy reliance on hydrocarbons
Imports (US\$ billions)	~8.2	~9.1	~8.9	High dependence on imported goods

The US dollar foreign exchange shortage in Trinidad & Tobago did not arise from a single factor. Instead, it reflects a combination of declining foreign reserves, volatile energy revenues, and high import dependence, all while the exchange rate remained relatively fixed. These conditions created pressure on the Central Bank to ration foreign currency and fueled debate over whether exchange-rate adjustment was necessary.

Economic Importance of the Energy Sector in Trinidad & Tobago

Indicator	Energy Sector Contribution	Source / Context
Share of GDP	~30%	Energy production remains the largest single sector of the economy
Share of Export Earnings	~80–81%	LNG, methanol, ammonia, and petroleum products dominate exports
Share of Government Revenue	~30–35%	Highly dependent on global energy prices
Share of Foreign Exchange Earnings	~80%	Primary source of U.S. dollar inflows
Employment Share	<5%	Capital-intensive sector with limited labor absorption

While the energy sector dominates exports and foreign exchange earnings, it employs relatively few people, and its output is largely priced in global commodity markets, limiting the immediate gains in competitiveness from currency devaluation.

Notes

1 World Bank, *Trinidad and Tobago – World Development Indicators*, GDP per capita and GDP statistics. <https://data.worldbank.org/country/trinidad-and-tobago>.

Accessed March 2026.

2 “Economists warn TT\$9 exchange rate a dangerous move,” *Trinidad & Tobago Guardian*, September 9, 2025. This article discusses economist commentary regarding proposals to move the exchange rate toward TT\$9 per US dollar.

3 “Devaluation—the good, the bad, and the public debt,” *Trinidad & Tobago Newsday*, September 10, 2025. The article outlines competing views regarding exchange-rate adjustment and its potential impact on inflation and public debt.

4 U.S. International Trade Administration, *Trinidad and Tobago – Country Commercial Guide: Market Overview*. <https://www.trade.gov/country-commercial-guides/trinidad-and-tobago-market-overview>. Accessed March 2026. This source provides statistics on the structure of Trinidad and Tobago’s economy and the importance of the energy sector.

5 International Monetary Fund, *Trinidad and Tobago: 2024 Article IV Consultation – Staff Report*. Washington, D.C.: IMF, 2024. The report discusses fiscal conditions, debt sustainability, and the country’s external sector vulnerabilities.

6 Government of Trinidad and Tobago, Ministry of Finance, *Review of the Economy 2024*. Port of Spain: Ministry of Finance. This publication provides official statistics on government debt, fiscal balances, and macroeconomic performance.

7 Central Bank of Trinidad and Tobago, *Foreign Reserves (Monthly) and Net Official Reserves Data Series*. <https://www.central-bank.org.tt>. Accessed March 2026.

These data were used to construct the reserve exhibits included in the case.

8 Central Bank of Trinidad and Tobago, *Annual Economic Survey 2024*. Port of Spain: Central Bank of Trinidad and Tobago. Provides historical context on the country's exchange-rate regime and foreign-exchange market conditions.

9 Guardian Media Limited, interview with Minister Davendranath Tancoo regarding exchange-rate policy and the proposal to devalue the Trinidad and Tobago dollar. *Trinidad & Tobago Guardian*, September 2025.

10 Food and Agriculture Organization (FAO), *Food Import Dependency in Caribbean Small Island Developing States*. Rome: FAO. The report documents Trinidad and Tobago's high dependence on imported food supplies.

11 International Monetary Fund, *World Economic Outlook Database*, October 2024 edition. Used for comparative macroeconomic statistics and external sector indicators.

12 Central Bank of Trinidad and Tobago, *Monetary Policy Reports and Foreign Exchange Market Commentary*, 2023–2025. These reports describe the operation of the managed-float exchange-rate regime and the allocation of foreign exchange through the banking system.

13 Arthur I. Stonehill, Michael H. Moffett, and others, *International Finance: Theory and Practice*. Upper Saddle River, NJ: Pearson Education. The case discussion of exchange-rate pass-through, price elasticity, and the Impossible Trinity draws conceptually on this text.

14 Paul Krugman and Maurice Obstfeld, *International Economics: Theory and Policy*. Boston: Pearson Education. The discussion of the J-curve effect and trade balance dynamics after currency depreciation draws from this literature.

15 Historical exchange-rate data used in the exhibits were compiled from ExchangeRates.org.uk, *USD–TTD Historical Exchange Rate Data*.

<https://www.exchangerates.org.uk/USD-TTD-spot-exchange-rates-history>.

Accessed March 2026.

16 Government of Trinidad and Tobago, Ministry of Finance, *Public Debt Statistical Bulletins and Sovereign Bond Disclosures*, 2023–2025. Used for information on USD-denominated sovereign bonds and interest obligations.

17 Central Bank of Trinidad and Tobago, *Financial Stability Reports*, various years. These reports provide context regarding foreign exchange shortages, banking sector conditions, and external vulnerabilities.

18 International Monetary Fund, *Small States and Macroeconomic Vulnerabilities*, IMF Policy Paper. Washington, D.C.: IMF. Provides background on macroeconomic risks faced by small island developing states.

A Currency at the Crossroads

Trinidad & Tobago's Devaluation Dilemma

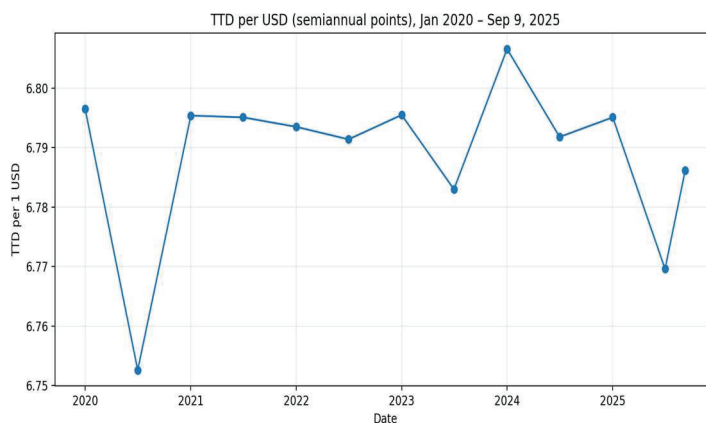
"Fixed exchange rates are like straitjackets; when the pressure builds, the consequences can tear the system apart."

Robert Mundell, Nobel Prize-winning Economist

Introduction

On a humid September morning in Port of Spain, Trinidad and Tobago's Minister of Finance, Davendranath Tancoo, sat at his desk with a set of briefing papers and the business section of the day's newspapers.

Exhibit 1. Trinidad & Tobago USD Exchange Rate (Biannual Observations)



Trinidad & Tobago USD Exchange Rate (Biannual Observations)		
Year	Date	TT\$ per USD
2020	1-Jan-20	6.7965
2020	1-Jul-20	6.7526
2021	1-Jan-21	6.7954
2021	1-Jul-21	6.7951
2022	1-Jan-22	6.7935
2022	1-Jul-22	6.7914
2023	1-Jan-23	6.7955
2023	1-Jul-23	6.783
2024	1-Jan-24	6.8066
2024	1-Jul-24	6.7918
2025	1-Jan-25	6.7951
2025	1-Jul-25	6.7696
2025	9-Sep-25	6.7862

Source: ExchangeRates.org.uk, USD-TTD Historical Exchange Rate Data.
<https://www.exchangerates.org.uk/USD-TTD-spot-exchange-rates-history>.

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

The official exchange rate remained at TT\$6.79 per US\$1, but on the streets, the parallel market whispered figures above TT\$8. Headlines on September 9, 2025, screamed: 'Economists warn TT\$9 exchange rate a dangerous move,' and a day later, 'Devaluation—the good, the bad, and the public debt.'^{1 2}What had once been a technical discussion among economists was now unfolding in public view.

As the national budget deadline approached, the question of whether the Trinidad & Tobago dollar should be devalued relative to the US dollar could no longer be avoided, as the exchange rate had become the focal point of a wider debate about the direction of the country's economy. Some argued that the official rate no longer reflected underlying market conditions and that devaluation was inevitable, while others warned that any abrupt changes could have far-reaching consequences.

Business groups complained about the difficulty of obtaining foreign exchange, and importers warned of delays in securing U.S. dollars for shipments. Meanwhile, households were worried about the rising cost of living and what a weaker currency might mean for prices.

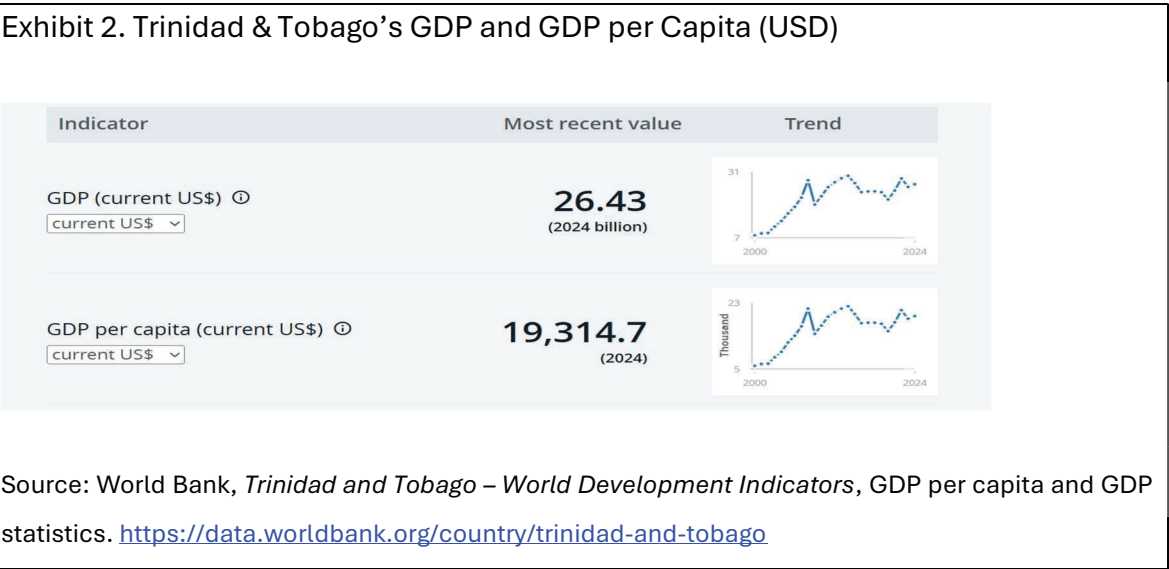
The memory of Argentina's 2001 currency collapse¹ loomed large in Minister Tancoo's mind: Would Trinidad & Tobago face a similar fate, or could it adjust before reserves and confidence were gone? Tancoo scanned the notes prepared by his advisors, which outlined competing arguments but offered no resolution. The budget announcement was approaching, and with it, the possibility that the government might signal a shift in policy.

¹ See Appendix A

As he leaned back into his chair, the realization hit him hard that a decision on whether to devalue the exchange rate or continue defending it could no longer be postponed. Markets, businesses, and households were increasingly forming expectations about the direction of policy, raising the cost of inaction.

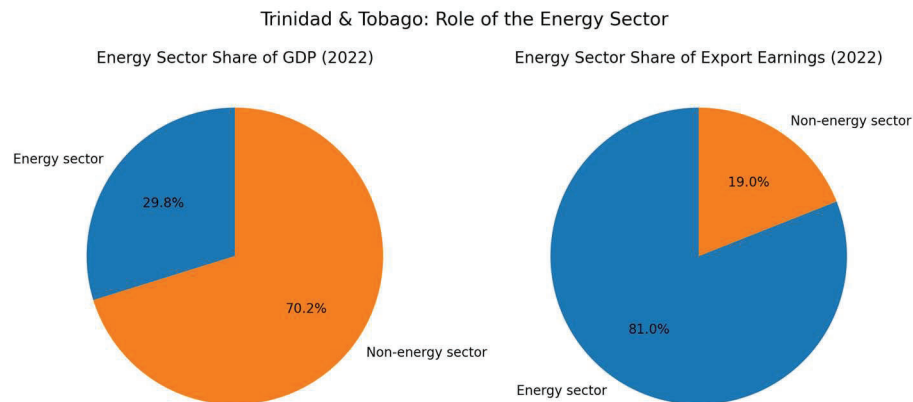
Trinidad & Tobago - Fueled by Oil

Trinidad and Tobago (T&T), located just off the northeast coast of Venezuela in the southern Caribbean, was a high-income small island developing state (SIDS)



with a GDP per capita of approximately US\$19,315 and a total nominal GDP of roughly US\$26.43 billion in 2024³. The energy sector, primarily natural gas and petrochemicals, which dominated its economy, accounted for nearly thirty percent (30%) of GDP and an outsized share (circa 80-plus percent) of export earnings when global commodity prices were high⁴.

Exhibit 3. Energy Sector as a Percentage of GDP and Export Earnings



Source: U.S. International Trade Administration, *Trinidad and Tobago – Country Commercial Guide: Market Overview*. <https://www.trade.gov/country-commercial-guides/trinidad-and-tobago-market-overview>.

Despite being high-income, Trinidad and Tobago’s non-energy sector remained relatively small in export earnings and highly import-intensive. This heavy dependence on hydrocarbons made the economy highly vulnerable to external shocks such as fluctuations in global energy demand and prices, which rippled through trade, government revenues, and the foreign exchange supply.²

Trinidad & Tobago’s Minister of Finance - “Uneasy lies the head that wears a crown.”

Davendranath “Dave” Tancoo had both legal and economic training, a combination that shaped his policy approach: methodical, cautious, and concerned with institutional credibility. Throughout his political career, Tancoo had emphasized fiscal prudence, maintaining balanced budgets, stabilizing debt, and preserving the value of the TT dollar, and he had positioned himself as a guardian of ordinary

² See Appendix G: Economic Importance of the Energy Sector in Trinidad & Tobago

citizens' welfare. His reputation depended heavily on defending the exchange rate and avoiding inflationary shocks that could erode public confidence or reduce living standards for vulnerable groups.

Tancoo's perspective on devaluation was grounded in a problem-solving view of the country's economic structure. In an interview with Guardian Media (September 2025), when business leaders such as Emile Elias proposed formally devaluing the Trinidad & Tobago dollar from TT\$6.79 to TT\$9 per US dollar, Tancoo forcefully pushed back. He argued that in Trinidad & Tobago's economic configuration at the time, devaluation "could not work to stimulate the T&T economy."

The finance minister's reasoning was multi-layered. First, he pointed out that the export sector was dominated by energy: production capacity was constrained, and many contracts (especially in natural gas and petroleum) were long-term. Second, Tancoo emphasized that non-energy exports, while politically and rhetorically important, were small relative to the import base and were heavily reliant on imported inputs.³

Third, Tancoo highlighted the risk of inflation. Devaluation typically increased the price of imported consumer goods, from food and medicine to machinery and spare parts. Additionally, inflation eroded real incomes, especially for fixed-income groups, and imposed heavy burdens on consumers, further complicating efforts to maintain social equity and policy credibility.

Social Impact of Devaluation and Inflation

Socially, inflation caused by devaluation tended to hit certain groups hardest, usually pensioners, households on fixed or low incomes, public servants with static wages, and small and medium enterprises (SMEs). These groups spent a larger

³ See Appendix F

share of their income on basic food, medicine, energy, transportation, and spare parts and inputs for goods.

Notably, Trinidad and Tobago's food import dependence was high, with 85% of its food needs currently met through imports, compared to around 60% two decades ago. Once inflation expectations rose, workers and public servants demanded wage adjustments, service providers raised prices in anticipation of higher input costs, and businesses attempted to hedge by raising prices, which in turn made policy credibility more brittle.

Public Debt Exposure & Devaluation Risk

Public debt in Trinidad & Tobago had become an increasingly significant component of the macroeconomic risk associated with the devaluation dilemma. While external (foreign-currency) government debt typically hovered within the ranges reported by finance officials, the most recent statistics indicated rising pressures.

The IMF's Article IV Consultation in 2024 confirmed that external buffers were present, but also that debt levels remained elevated and that servicing foreign-currency debt obligations, especially Eurobonds, posed a significant vulnerability in the event of any depreciation of the TT dollar.⁵

External debt as a share of GDP increased in recent years, rising from about 24%-25% in 2021–2022 to 38%-43% by 2023-2024. Simultaneously, the *Government's Review of the Economy 2024* provided figures on total government debt (domestic, external, and government-guaranteed), showing that general government liabilities had increased and were approaching levels that worried both markets and policymakers⁶.

Exhibit 4. Trinidad & Tobago's USD Eurobonds as of August 2025.

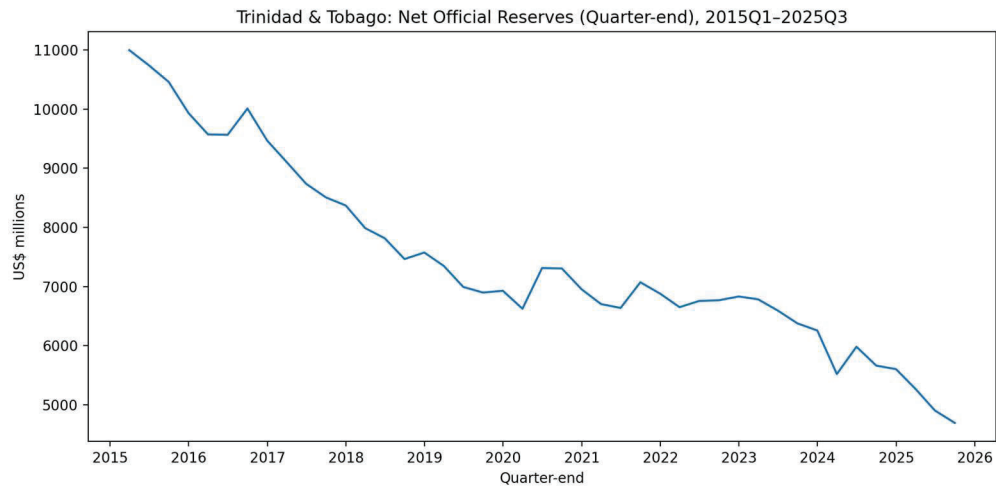
Issuer Name	Amt Out	Next Call Px	Cpn	Maturity	BBG Composite	Mty Type	Currency	Annual Interest Rate
Trinidad & Tobago Govt Int'l Bond	750,000,000	100	6.40%	6/26/2034	BB+	CALLABLE	USD	48,000,000
Trinidad & Tobago Govt Int'l Bond	1,000,000,000	N/A	4.50%	8/4/2026	BB+	AT MATURITY	USD	45,000,000
Trinidad & Tobago Govt Int'l Bond	560,000,000	100	5.95%	1/14/2031	BB+	CALLABLE	USD	33,320,000
Trinidad & Tobago Govt Int'l Bond	500,000,000	100	4.50%	6/26/2030	BB+	CALLABLE	USD	22,500,000
Trinidad & Tobago Govt Int'l Bond	150,000,000	N/A	5.875%	5/17/2027	BB+	AT MATURITY	USD	8,812,500
Trinidad & Tobago Govt Int'l Bond	500,000,000	100	4.50%	6/26/2030	BB+	CALLABLE	USD	22,500,000
Trinidad & Tobago Govt Int'l Bond	750,000,000	100	6.40%	6/26/2034	BB+	CALLABLE	USD	48,000,000
Trinidad & Tobago Govt Int'l Bond	560,000,000	100	5.95%	1/14/2031	BB+	CALLABLE	USD	33,320,000
Trinidad & Tobago Govt Int'l Bond	1,000,000,000	N/A	4.50%	8/4/2026	BB+	AT MATURITY	USD	45,000,000
Trinidad & Tobago Govt Int'l Bond	150,000,000	N/A	5.875%	5/17/2027	BB+	AT MATURITY	USD	8,812,500
	5,920,000,000							315,265,000

Source: Bloomberg

Many foreign-currency bonds and obligations (especially Eurobonds) had fixed payment schedules in U.S. dollars or other foreign currencies, and therefore any depreciation of the Trinidad & Tobago dollar increased the TT dollar burden of both interest and principal payments. Beyond direct service costs, currency depreciation also interacted with debt sustainability in several ways, namely interest rate effects, inflation, foreign exchange reserves, and market credibility.

Net Official Reserves

Exhibit 5. Trinidad and Tobago's Net Official Reserves 2015 - 2025



Source: Central Bank of Trinidad and Tobago, *Foreign Reserves (Monthly) and Net Official Reserves Data Series*. <https://www.central-bank.org.tt>.

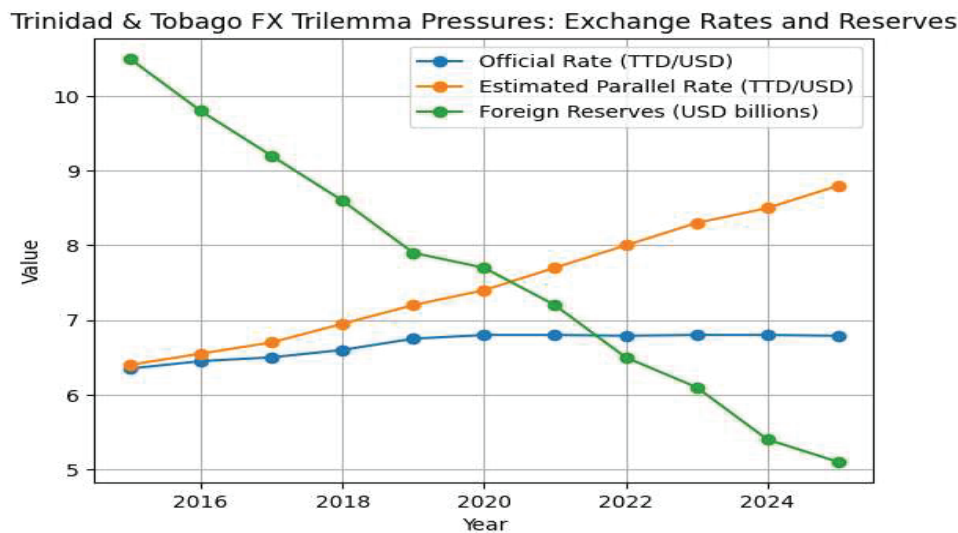
On the sustainability front, while Trinidad & Tobago was still judged to have “adequate external buffer coverage” in months of import cover (about 8.3 months according to the IMF)⁷ and had positive current account outcomes under recent energy price regimes, these buffers had to be considered in the context of worsening global borrowing conditions, interest rate shocks, and the potential for currency depreciation.

Institutional Factors: Friction, Corruption, and FX Access

Trinidad & Tobago maintained a nominally open and liberal investment climate, with most formal barriers to investment removed and foreign participation in many sectors permitted without restriction. However, the lived experience of businesses, especially small and medium-sized firms, painted a more complex picture. Delays and uncertainty in obtaining foreign exchange (USD) were frequently reported. Importers and manufacturers often waited weeks or months for FX allocations at

official rates, during which time parallel (informal) market premiums increased, input costs rose, and supply chains were disrupted.⁸ Parallel market premiums were estimated to exceed 15–20 percent at various points, reflecting persistent excess demand for foreign exchange.

Exhibit 6: Trinidad & Tobago's Official Rate vs Parallel Rate vs Reserves



Source: Central Bank of Trinidad and Tobago, *Foreign Reserves (Monthly) and Net Official Reserves Data Series*. <https://www.central-bank.org.tt>

This FX rationing meant that even when firms followed regulatory procedures, bureaucratic bottlenecks at banks, the Central Bank, and in customs slowed or blocked their ability to import raw materials, spare parts, machinery, and critical inputs. Public service processing times for necessary permits or foreign exchange licensing often lacked predictability, and some government offices had limited digitalization or automation, which increased reliance on manual reviews. These institutional frictions slowed business and would exacerbate the effects of a currency devaluation. Business associations, labor groups, and policymakers offered competing recommendations, each reflecting different economic interests and exposure to exchange-rate movements.

Lessons from Argentina

The memory of Argentina's 2001 currency collapse⁴ had rightly weighed heavily on Minister Tancoo's mind. In the 1990s, Argentina's peso was tied one-to-one with the U.S. dollar under a currency board. This meant the central bank was legally bound to exchange pesos for dollars at the fixed rate, forcing it to sell USD from reserves whenever citizens demanded them.

As the dollar strengthened globally and Brazil devalued the real, Argentina's exports lost competitiveness. Trade deficits drained reserves, and residents fled into dollars. The rigid peg left no room for gradual adjustment. By 2001, reserves were gone, the peg collapsed, and Argentina defaulted on its sovereign debt. Would Trinidad & Tobago face a similar fate, or could it adjust before reserves and confidence were gone?

The Crossroads

As the budget deadline approached, the costs of both action and inaction became increasingly visible. Devaluation risked triggering inflation, increasing debt burdens, and placing pressure on vulnerable households. Maintaining the existing rate risked prolonging foreign exchange shortages, sustaining parallel market distortions, and eroding policy credibility. With no option offering a clear resolution, Minister Tancoo faced a decision defined not by certainty, but by trade-offs. The question remained: which set of risks was the country better positioned to bear?

The policy choices available suggested that not all objectives, namely, exchange-rate stability, monetary independence, and free capital flows, could be maintained simultaneously. One of these attributes had to be sacrificed, a dilemma often described in international finance as the impossible trinity⁹, but what would that sacrifice imply for policy credibility?

⁴ See Appendix A

Exhibit 7. Policy Trade-Offs Under Alternative Exchange Rate Scenarios

Variable	Maintain Peg (~TT\$6.79)	Devalue (~TT\$9)	Managed Float
FX Availability	Constrained	Improves	Gradual
Inflation	Low (short-term)	High (immediate)	Moderate
Public Debt (TT\$)	Stable	↑ sharply (+TT\$13B)	↑ gradually
Import Costs	Stable	↑ significantly	↑ moderately
Export Competitiveness	Limited	Modest gains	Gradual gains
Reserves Pressure	High	Reduced	Moderated
Parallel Market	Persists	Narrows	Gradually narrows
Political Risk	Business backlash	Public backlash	Shared
Policy Credibility	Questioned	Risky reset	Mixed

He faced a complex, high-stakes choice but could no longer postpone a decision. He opened his laptop to review his analysts' reports as he pondered the critical question: Should he devalue the official Trinidad & Tobago dollar?

Appendix A: Argentina's Currency Board Regime and Its Collapse

In 1991, Argentina adopted a currency board regime, pegging the peso to the U.S. dollar at a 1:1 rate. This was a radical measure designed to halt hyperinflation, restore credibility, and attract investment. Under a currency board, every peso in circulation had to be backed by U.S. dollar reserves, eliminating discretionary monetary policy. While initially successful in taming inflation and stabilizing the economy, the regime proved unsustainable by the end of the 1990s for several reasons.

➤ Dollar Appreciation and Loss of Competitiveness

- During the 1990s, the U.S. dollar appreciated significantly against major currencies such as the Deutsche mark (later the euro) and the Japanese yen.
- Because Argentina's peso was pegged to the dollar, its currency appreciated in real terms relative to its key trading partners.
- Argentine exports, particularly agricultural goods and manufactured products, became more expensive abroad, eroding competitiveness and widening trade deficits.

➤ Brazil's Devaluation (1999)

- Brazil, Argentina's largest trading partner and competitor in agricultural and industrial exports, devalued the real in 1999.
- This exacerbated Argentina's loss of competitiveness, as Brazilian goods suddenly became cheaper in world markets.
- Argentine firms could not adjust prices downward due to the rigid peg, amplifying trade imbalances.

➤ Persistent Trade Deficits and Reserve Losses

- The combined effects of dollar appreciation and Brazilian devaluation led to chronic current account deficits.
- To maintain the peg, Argentina's central bank had to sell U.S. dollar reserves.
- Over time, dwindling reserves undermined the credibility of the currency board, as markets began to doubt Argentina's ability to fully back pesos with dollars.

➤ Capital Flight and Currency Mismatch

- As confidence in the peg eroded, Argentine residents and firms sought safety in U.S. dollars ("dollarization from below").
- Banks faced currency mismatches, with peso-denominated liabilities but dollarized assets and debts.
- Fear of devaluation triggered capital flight, draining reserves even faster and creating a vicious cycle.

➤ Policy Inflexibility and External Shocks

- The currency board eliminated Argentina's ability to conduct an independent monetary policy. Interest rates followed U.S. cycles, which were often inappropriate for Argentina's domestic needs.
- Fiscal deficits and rising public debt further eroded market confidence. Without the ability to monetize debt or adjust the exchange rate, the government faced growing pressure.
- By late 2001, amid recession and social unrest, the peg was abandoned, and the peso was allowed to float, leading to a massive devaluation and default on sovereign debt.

Appendix B: Exchange Rate Pass-through and Price Elasticity of Demand

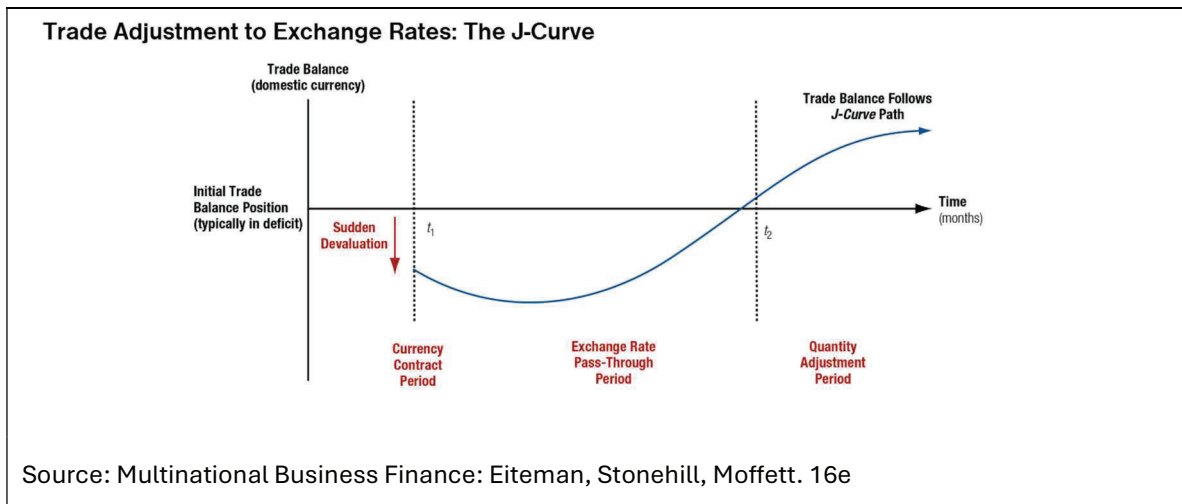
Exchange rate pass-through refers to the degree to which changes in a country's exchange rate are reflected in the domestic prices of imported and exported goods. When the currency depreciates, the local-currency price of imports typically rises because foreign goods must now be purchased with a weaker currency. If the full percentage change in the exchange rate is reflected in domestic prices, economists describe this as complete pass-through. However, in many real-world situations, firms absorb part of the exchange-rate change through adjustments in margins, sourcing, or pricing strategies, resulting in partial pass-through. The extent of pass-through is closely linked to the price elasticity of demand for the product. When demand for a good is relatively inelastic (consumers continue to buy it even when the price rises), firms are more likely to pass through most of the exchange-rate change to consumers. By contrast, when demand is elastic, firms may limit price increases to avoid losing market share.

Appendix C: J-Curve Effect

The J-curve describes the typical pattern observed in a country's trade balance following a currency depreciation. In the short run, a depreciation often causes the trade balance to worsen before it improves, producing a path that resembles the letter "J" (tilted to the right). This occurs because import prices rise immediately in domestic currency terms, while import and export quantities adjust more slowly. Import contracts are often fixed in the short term, and consumers and firms may take time to reduce imports or increase domestic production.

Similarly, exporters may need time to expand production, renegotiate contracts, or enter new markets before benefiting from improved price competitiveness. As these adjustments take place over time, export volumes may rise, and import demand may fall, eventually improving the trade balance if demand for exports and imports is sufficiently responsive to price changes. The J-curve framework, therefore,

highlights the dynamic and delayed nature of trade adjustment following exchange rate changes, which is highly relevant for small open economies facing currency depreciation.



Appendix D: The Impossible Trinity (The Policy Trilemma)

In international macroeconomics, the “Impossible Trinity”, or policy trilemma, describes the constraint that a country cannot simultaneously achieve three desirable policy objectives: (1) exchange rate stability, (2) full financial integration (free movement of capital), and (3) independent monetary policy. Economic theory demonstrates that only two of these three goals can be achieved simultaneously. For example, a country that chooses to maintain a fixed or tightly managed exchange rate while allowing free capital mobility must sacrifice monetary independence, because domestic interest rates must align with global rates to maintain the peg. Conversely, a country that wishes to retain monetary independence while maintaining open capital markets must allow its exchange rate to float. The trilemma framework helps explain why governments facing currency pressure, such as Trinidad and Tobago, must make difficult trade-offs among defending the exchange rate, maintaining domestic policy autonomy, and allowing

capital to move freely. These constraints mean that no exchange-rate policy can simultaneously deliver stability, flexibility, and full market openness without cost.

Appendix E: Managed Float vs Pegged Exchange Rate

Countries adopt different exchange-rate regimes to manage the value of their currencies relative to others. Two common arrangements are a managed float and a fixed exchange rate peg. Under a fixed peg, the central bank commits to maintaining the domestic currency at a specific rate against another currency (or basket of currencies). To preserve this rate, the central bank must actively intervene in the foreign exchange market by buying or selling foreign reserves and adjusting monetary policy as necessary. This system provides exchange-rate stability but often limits monetary independence because domestic interest rates must align with those needed to maintain the peg. By contrast, under a managed float (sometimes called a “dirty float”), the currency is generally allowed to fluctuate according to market forces, but the central bank intervenes periodically to influence the exchange rate or prevent excessive volatility. A managed float, therefore, offers more flexibility for domestic monetary policy, although it can still require intervention if large imbalances arise. In practice, many countries operate systems that lie between these two extremes. Trinidad and Tobago’s exchange-rate system has often been described as a managed float with characteristics of a quasi-peg, where the central bank allows some movement but maintains the rate within a relatively narrow band through foreign-exchange interventions.

Appendix F

Trinidad & Tobago External Trade Balance (2024 Estimates) (US\$ billions)			
Item	Value (US\$ billions)	% of Total Trade	Notes
Exports of Goods	12.7	100%	Dominated by energy exports
Energy Exports (LNG,	10.3	81%	Natural gas, methanol, ammonia,
Non-Energy Exports	2.4	19%	Chemicals, manufactured goods, food
Imports of Goods	8.9	100%	Highly import-dependent economy
Food Imports	1.6	18%	Cereals, dairy, processed foods
Machinery & Transport	2.3	26%	Industrial equipment, vehicles
Manufactured Goods	2.1	24%	Consumer goods, electronics
Fuel & Industrial Inputs	1.4	16%	Energy inputs for industry
Other Imports	1.5	16%	Chemicals, plastics, miscellaneous
Trade Balance (Goods)	3.8	—	Surplus driven by energy exports
Composition of Trinidad & Tobago Energy Exports (2024 Approximate Annual Values)			
Energy Export Product	Estimated Export Value (US\$ billions)	Share of Energy Exports	Key Export Markets
Liquefied Natural Gas	4.1	40%	Spain, UK, Latin America
Methanol	2.1	20%	United States, Europe
Ammonia	1.6	16%	United States, Brazil
Refined Petroleum	1.2	12%	Caribbean, Central America
Crude Oil	0.8	8%	United States
Other Petrochemicals	0.5	4%	United States, Latin America
Total Energy Exports	10.3	100%	—
Major Import Categories of Trinidad & Tobago (2024 Approximate Annual Values)			
Import Category	Estimated Import Value (US\$ billions)	Share of Total Imports	Examples
Machinery & Transport	2.3	26%	Industrial machinery, vehicles,
Manufactured Goods	2.1	24%	Electronics, appliances, consumer
Food & Agricultural Products	1.6	18%	Cereals, dairy products, meat,
Fuel & Industrial Inputs	1.4	16%	Refined fuels, chemicals used in
Chemicals & Pharmaceuticals	0.8	9%	Medicines, plastics, fertilizers
Other Imports	0.7	7%	Miscellaneous consumer goods
Total Imports	8.9	100%	—

Appendix G

Top Export Markets for Trinidad & Tobago (2024 Approximate Shares of Total Exports)

Rank	Export Market	Estimated Share of Exports	Major Products Exported
1	United States	~39%	Ammonia, methanol, LNG, petroleum products
2	European Union	~16%	LNG, petrochemicals
3	CARICOM Countries	~12%	Refined fuels, manufactured goods
4	Latin America (Brazil, Colombia, etc.)	~10%	Ammonia, petrochemicals
5	Central America	~8%	Refined petroleum products
6	Asia	~7%	LNG and petrochemical products
7	Other Markets	~8%	Chemicals and industrial products
Total	—	100%	—

Macroeconomic Context Behind Trinidad & Tobago’s Foreign Exchange Shortage

Indicator	2020	2022	2024 (Approx.)	Interpretation
TT\$/USD Official Exchange Rate	~6.75	~6.79	~6.79	Exchange rate remained largely stable due to Central Bank management
Net Official Reserves (US\$ billions)	7	6.8	~5.4	Gradual decline in foreign exchange buffers
Energy Export Prices (Global Gas & Petrochemicals Index)	Low (pandemic)	High	Moderating	Export revenues fluctuate with global commodity prices
Energy Sector Share of Exports	~78%	~81%	~80%	Continued heavy reliance on hydrocarbons
Imports (US\$ billions)	~8.2	~9.1	~8.9	High dependence on imported goods

Economic Importance of the Energy Sector in Trinidad & Tobago

Indicator	Energy Sector Contribution	Source / Context
Share of GDP	~30%	Energy production remains the largest single sector of the economy
Share of Export Earnings	~80–81%	LNG, methanol, ammonia, and petroleum products dominate exports
Share of Government Revenue	~30–35%	Highly dependent on global energy prices
Share of Foreign Exchange Earnings	~80%	Primary source of U.S. dollar inflows
Employment Share	<5%	Capital-intensive sector with limited labor absorption

Notes

¹ “Economists warn TT\$9 exchange rate a dangerous move,” *Trinidad & Tobago Guardian*, September 9, 2025

² “Devaluation—the good, the bad, and the public debt,” *Trinidad & Tobago Newsday*, September 10, 2025.

³ World Bank, *World Development Indicators: Trinidad and Tobago*, <https://data.worldbank.org/country/trinidad-and-tobago>. Accessed March 2026.

⁴ U.S. International Trade Administration, *Trinidad and Tobago – Country Commercial Guide: Market Overview*. <https://www.trade.gov/country-commercial-guides/trinidad-and-tobago-market-overview>.

⁵ International Monetary Fund, *Trinidad and Tobago: 2024 Article IV Consultation – Staff Report*. Washington, DC: IMF.

⁶ Government of Trinidad and Tobago, Ministry of Finance, *Review of the Economy 2024*. Port of Spain

⁷ Central Bank of Trinidad and Tobago, *Foreign Reserves (Monthly) and Net Official Reserves Data Series*. <https://www.central-bank.org.tt>.

⁸ Central Bank of Trinidad and Tobago, *Foreign Reserves (Monthly) and Net Official Reserves Data Series*. <https://www.central-bank.org.tt>.

⁹⁹ Arthur I. Stonehill and Michael H. Moffett, *International Finance: Theory and Practice*. Pearson Education.

JAM-DEX: At the Edge of Stability

Evaluating the Potential Impact of Digital Currency Adoption on the Economics of Commercial Banks

Teaching Note

Case Synopsis

This case examines the introduction of Jamaica's central bank digital currency, JAM-DEX, through the lens of financial sector stability and the potential impact on the economics of commercial banks. In late 2025, the Bank of Jamaica faced a challenge arising from JAM-DEX, as while the digital currency met all technical, legal, and regulatory objectives, the data revealed that the supporting payments infrastructure appeared less developed than anticipated.

For the protagonist, Natalie Haynes, Deputy Governor of the Bank of Jamaica, the emergence of frictions in adoption prompted a reassessment of whether introducing a universally accessible, risk-free central bank digital currency could, over time, transform the business of commercial banking, alter bank balance sheets and systemic risk dynamics, even in the absence of direct disintermediation.

The dilemma she now faced was increasingly clear. Did the introduction of JAM-DEX make Jamaica's financial system more inclusive and stronger, or could it potentially inadvertently increase the financial stability risks in Jamaica's commercial banking system, which the central bank was meant to contain, despite its careful design and regulatory intent?

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

The case, therefore, presents an opportunity to explore the current role of commercial banks as financial intermediaries and how the introduction of digital currency can alter this role, introducing new risks and rewards. Students, therefore, from Hayne's perspective, are invited to reassess whether a carefully designed digital currency can still pose unintended risks through the transmission channels central to commercial banks' business.

Most importantly, it also prompts students to think proactively about the unintended consequences of adopting digital currency, recognize critical changes in the financial sector as adoption rates grow, and formulate central bank responses under uncertainty.

Teaching Objectives

By the end of the session, students should be able to:

1. Understand why financial institutions are considered “special” in financial theory, and how implementing digital currency may erode or reinforce that specialness.
2. Analyze financial stability risks related to central bank digital currency using the five transmission channel frameworks, and how that might differ across different economic structures.
3. Distinguish between first-order design risks and second-order system effects.
4. Evaluate trade-offs between innovation and financial sector stability.
5. Formulate central-bank responses under uncertainty.

The case is well-suited for graduate-level courses on the management of financial institutions, financial stability & regulation, and digital finance/fintech strategy.

Teaching Plan

A teaching plan for a 90-minute session could be constructed as seen below:

	Teaching Segment	Time
1	Case Setup: What exactly unsettled Natalie Haynes when reviewing JAM-DEX adoption data? If the Bank of Jamaica underestimated something about how money circulates, what other aspects of the financial system might also have been underestimated? Students should understand that the problem is not technological failure, but uncertainty about systemic consequences.	10 min
2	Discuss why banks are "special". Why do banks play a unique role in the economy? Why does the concentration of Jamaica's financial sector amplify the importance of banks?	15 min
3	Understanding the JAM-DEX Design. Why was the digital currency designed as "digital cash" rather than a deposit substitute?	15 min
4	Transmission Channels Analysis. Through which mechanisms could JAM-DEX affect the economics of commercial banks? Why do digital currencies raise second-order systemic effects rather than immediate disruptions?	30 min
5	Policy Evaluation: Which assumptions in the JAM-DEX design might not hold as adoption increases? What policy adjustments could mitigate emerging risks?	10 min
6	Decision Point: Did introducing JAM-DEX strengthen Jamaica's financial system or inadvertently increase systemic risk?	5 min
7	Wrap-Up & Lessons: What does this case teach about innovation in financial systems?	5 min
	Total	90 min

Discussion Questions

1. Why are commercial banks traditionally considered "special" within financial systems? Which of the core banking functions described in the case are most important in Jamaica's financial sector?
2. How might the introduction of a risk-free central bank digital currency, such as JAM-DEX, affect banks' traditional roles in liquidity provision, credit allocation, and payment services?
3. Could the introduction of JAM-DEX reinforce rather than weaken the role of banks in Jamaica's financial system? Under what conditions might this occur?
4. Through which of the five transmission channels presented in the case could JAM-DEX most influence the economics of Jamaican commercial banks?
5. Why might even small changes in deposit behavior or payment flows matter in a small and concentrated financial system like Jamaica's?
6. Which of the five transmission channels poses the greatest potential risk to financial stability in Jamaica? Why?

7. Using the five transmission channels framework (liability, asset, fee income, run-risk, and information), analyze how the financial stability implications of a central bank digital currency such as JAM-DEX may differ between (i) a small, bank-centric economy like Jamaica, (ii) a comparable small economy such as The Bahamas with the Sand Dollar, and (iii) a large, systemically diversified economy such as China with the Digital Yuan (e-CNY). Which transmission channels are most likely to pose systemic risk in each context, and why?
8. What safeguards did the Bank of Jamaica include in the design of JAM-DEX to protect the stability of the banking system?
9. Which risks appear to have been addressed through JAM-DEX's initial design, and which risks emerge only as second-order effects as adoption grows?
10. Why might systemic risks arise even when a central bank digital currency is intentionally designed not to compete with bank deposits?
11. What economic and social benefits was the Bank of Jamaica hoping to achieve through the introduction of JAM-DEX?
12. What trade-offs arise between promoting financial innovation and preserving financial stability?
13. What additional policy or supervisory measures should the Bank of Jamaica consider to mitigate potential financial stability risks associated with JAM-DEX?
14. Did the introduction of JAM-DEX make Jamaica's financial system more inclusive and stronger, or could it potentially inadvertently increase financial stability risks in Jamaica's commercial banking system?

Class Activity to Anchor Concepts Prior to Case Discussion: “The Group Fund Experiment”

Objective: To help students “feel” what banks do before analyzing how digital currency challenges that role.

Step 1: Tell students, “Imagine five of you form a travel group. Each of you puts \$1,000 into a shared fund. The agreement is simple: anyone can withdraw their money at any time if needed.” So total fund = \$5,000

Now add: “You decide to lend \$4,000 of that fund to one member to start a small business. The loan will be repaid in 3 years.” Pause, then ask:

- How many people think this is reasonable?
- What makes it risky?

Students may immediately recognize the tension:

- The money is locked up.
- But everyone expects immediate access.

Write on the board:

Liquid promise (withdraw anytime)

vs

Illiquid investment (3-year loan)

Tell them: “Congratulations. You have just created a bank.”

Step 2: Introduce the Shock (3 minutes)

Now add: “One of you hears a rumor that the borrower’s business might fail. You can withdraw instantly through an app. Would you withdraw?”

Hands will go up.

Then ask: What happens if everyone withdraws at once? Was the fund insolvent, or just illiquid?

Students should now grasp:

- Runs are not irrational.
- Liquidity transformation is fragile.
- Confidence matters.

Step 3: Introduce Digital Currency (3 - 4 minutes)

Now change the scenario: “Now imagine the government offers each of you a completely safe digital wallet. You can move your money from the group fund into that wallet instantly, 24/7, with one tap.”

Ask:

- Does this make you more likely to withdraw quickly?
- Does it change how risky the group fund feels?
- Does it change how the group should manage its money?

This is the moment that students should recognize:

- The exit is easier.
- First-mover advantage increases.
- The fund (bank) must now hold more liquidity.
- Lending becomes harder.

Bridge to Case

Now connect explicitly: “Banks are special because they transform long-term loans into money you can access anytime. But what happens if a new, perfectly safe digital alternative exists?”

Then write the transition question:

How do digital currencies challenge the traditional role of banks as intermediaries?

Now, students are primed to see the following channels as avenues for a digital currency to disrupt the traditional roles of commercial banks:

- Liability channel (funding instability)
- Run-risk channel (speed)
- Asset channel (less lending)
- Fee channel (if transfers become free)
- Information channel (if transactions move elsewhere)

Discussion and Analysis

Question 1 (Learning Objective 1)

Why are commercial banks traditionally considered “special” within financial systems? Which of the core banking functions described in the case are most important in Jamaica’s financial sector?

Commercial banks are traditionally considered “special” because they perform critical functions that support the efficient operation of the financial system and the broader economy. According to financial intermediation theory, banks transform illiquid assets into liquid liabilities by accepting deposits that can be withdrawn on demand while simultaneously issuing longer-term loans to households and businesses.

This process enables liquidity and maturity transformations, allowing savers to maintain access to their funds while borrowers receive longer-term financing. Banks also serve as delegated monitors, meaning they collect and analyze borrower information and use that information to allocate credit efficiently. In addition, banks provide payment services and act as key transmission channels for monetary policy.

In the Jamaican context described in the case, these functions are important because the financial system is relatively small and highly concentrated. Commercial banks dominate payments infrastructure, credit allocation, and liquidity provision.

In addition, retail deposits serve as the primary funding source for banks, making the stability of deposit relationships central to financial intermediation. Because Jamaica has relatively limited capital market depth, households and small and medium-sized enterprises rely heavily on banks for financing.

As a result, banks' roles in liquidity transformation, credit allocation, and the payment system are highly important to Jamaica’s financial stability and economic activity.

Question 2 (Learning Objective 1)

How might the introduction of a risk-free central bank digital currency, such as JAM-DEX, affect banks' traditional roles in liquidity provision, credit allocation, and payment services?

Students may approach this question from multiple perspectives. The introduction of a risk-free central bank digital currency, such as JAM-DEX, can affect banks' traditional roles by altering how liquidity is provided, how payments are made, and how banks interact with customers.

First, JAM-DEX introduces an alternative form of liquidity that does not rely on bank balance sheets. Even if the digital currency does not pay interest, it represents a direct liability of the central bank and may be perceived as safer than commercial bank deposits. Over time, this could weaken banks' role as the primary providers of transactional liquidity if households increasingly hold transaction balances in digital wallets rather than bank accounts.

Second, changes in deposit behavior can indirectly affect credit allocation. If deposit balances become less stable or more volatile due to digital currency adoption, banks may face higher funding costs or increased liquidity management challenges. In response, banks might tighten lending standards, raise loan interest rates, or reduce credit supply, particularly to smaller borrowers.

Third, JAM-DEX can influence banks' payment services business. Payment services generate fee income and strengthen customer relationships for banks. If digital currency payments become widely used and are designed to be free or low-cost, banks may see their payment revenues decline. This could weaken the profitability of payment services and force banks to rethink how they generate revenue from transaction relationships.

Question 3 (Learning Objective 1)

Could the introduction of JAM-DEX reinforce rather than weaken the role of banks in Jamaica's financial system? Under what conditions might this occur?

Students may approach this question from multiple perspectives. Although digital currency may appear to challenge banks' traditional role, it could also reinforce their importance under certain conditions. In the JAM-DEX model described in the case, the Bank of Jamaica deliberately adopted a hybrid distribution structure in which commercial banks and other regulated intermediaries act as the primary channels

through which digital currency reaches consumers. Under this structure, banks continue to play a key role in providing digital wallets, managing customer relationships, and integrating digital currency with existing payment systems.

If banks successfully innovate around digital currency services, they could expand their role in financial intermediation rather than lose it. For example, banks could develop value-added services such as digital wallets, merchant payment platforms, cross-border payments, or financial management tools that integrate JAM-DEX with traditional banking services. These services could strengthen customer relationships and create new revenue opportunities.

Furthermore, if JAM-DEX improves payment efficiency and financial inclusion, banks may benefit indirectly from increased economic activity and broader participation in the formal financial system. In this scenario, digital currency would not replace banks but instead become part of an expanded financial ecosystem in which banks remain essential intermediaries.

Question 4 (Learning Objective 2)

Through which of the five transmission channels presented in the case could JAM-DEX most influence the economics of Jamaican commercial banks?

JAM-DEX could influence the economics of Jamaican commercial banks through five key transmission channels: liabilities, assets, fee income, risk of runs, and information.

The liability channel refers to potential changes in deposit behavior. Because JAM-DEX represents a direct liability of the central bank, depositors may choose to hold some transactional balances in digital currency rather than in bank deposits. Even modest shifts in deposits could affect the stability and cost of bank funding.

The asset channel describes how changes in funding affect banks' lending behavior. If deposit funding becomes more volatile or expensive, banks may reduce lending, increase loan rates, or shift toward lower-risk assets such as government securities. This could affect the availability of credit for households and small businesses.

The fee-income channel relates to banks' payment revenues. If JAM-DEX transactions are free or low-cost, banks may lose fee income from payment services such as transfers and merchant transactions.

The run-risk channel concerns the speed at which funds could move during periods of stress. Digital currency may allow depositors to transfer funds instantly from bank deposits into central bank money, potentially accelerating bank runs.

Finally, the information channel refers to how digital currency transactions could alter banks' access to transaction data. If payments shift away from bank accounts, banks may lose valuable information used for credit assessment and risk monitoring.

Students may debate and present their choice with justifications.

Question 5 (Learning Objective 2)

Why might even small changes in deposit behavior or payment flows matter in a small and concentrated financial system like Jamaica's?

Students may approach this question from multiple perspectives. In a small, concentrated financial system such as Jamaica's, even relatively small changes in deposit behavior or payment flows can have significant effects because financial intermediation is heavily concentrated among a limited number of institutions. Jamaican commercial banks rely heavily on retail deposits as a stable and low-cost source of funding. These deposits support lending to households and small businesses and help sustain the broader credit system.

If a portion of transaction balances gradually migrates to digital currency wallets, banks may experience subtle but persistent changes in their funding structure. Even if the migration is modest, the loss of stable deposit funding could increase banks' reliance on alternative funding sources such as wholesale markets or foreign borrowing. These funding sources tend to be more volatile and sensitive to market conditions.

Additionally, because Jamaica's financial sector is relatively concentrated, disruptions affecting one or two major banks could have systemic implications. Small shifts in funding costs or deposit stability could therefore influence lending behavior, asset composition, and financial stability across the entire system.

Question 6 (Learning Objective 2)

Which of the five transmission channels poses the greatest potential risk to financial stability in Jamaica? Why?

Students may approach this question from multiple perspectives. Among the five transmission channels, the liability channel arguably poses the greatest long-term risk to financial stability in Jamaica. This is because commercial banks rely heavily on retail deposits as their primary funding source. Deposits provide relatively stable, low-cost funding that supports the traditional banking model of maturity transformation and credit creation.

If JAM-DEX gradually reduces the stability of transaction deposits by offering a convenient and risk-free alternative, banks may face increased funding volatility. Even if deposit migration occurs slowly, banks may need to compete more aggressively for deposits by raising interest rates or offering incentives. This could compress bank profitability and alter balance-sheet management decisions.

Changes in the liability structure can also affect other transmission channels. For example, higher funding costs may lead banks to adjust lending practices, influencing the asset channel. Similarly, increased funding volatility could heighten vulnerability during periods of financial stress, reinforcing the run-risk channel.

Because deposits underpin the entire banking model, changes in deposit stability can affect multiple aspects of bank behavior and financial system resilience.

Question 7 (Learning Objective 2)

Using the five transmission channels framework (liability, asset, fee income, run-risk, and information), analyze how the financial stability implications of a central bank digital currency such as JAM-DEX may differ between (i) a small, bank-centric economy like Jamaica, (ii) a comparable small economy such as The Bahamas with the Sand Dollar, and (iii) a large, systemically diversified economy such as China with the Digital Yuan (e-CNY). Which transmission channels are most likely to pose systemic risk in each context, and why?

The financial stability implications of central bank digital currencies (CBDCs) vary significantly across economic structures, as the strength and transmission of each channel depend on the depth, composition, and institutional features of the financial system.

1. Small, Bank-Centric Economy (Jamaica – JAM-DEX)

In Jamaica, the liability channel poses the most significant systemic risk. Commercial banks rely heavily on retail deposits as their primary funding source. Even modest shifts from deposits to CBDC wallets can increase funding volatility, raising banks' cost of funds and potentially constraining credit supply. The asset channel follows directly, as higher funding costs or instability may lead banks to reduce lending, particularly to SMEs, amplifying macroeconomic effects. The run-risk channel is also material. Given limited financial system buffers, the ability to rapidly convert deposits into central bank money may accelerate liquidity stress during periods of uncertainty. The fee-income and information channels are secondary but still relevant. Reduced payment fees and loss of transactional data could weaken profitability and credit assessment over time. Therefore in Jamaica, risks are amplified due to structural dependence on banks, making the liability and run-risk channels particularly critical.

2. Comparable Small Economy (Bahamas – Sand Dollar)

The structure of The Bahamas is broadly similar, but the realized impact across channels remains limited due to low adoption. The liability and asset channels are theoretically important but have not materially affected banks due to minimal usage. However, the run-risk channel remains a latent concern, particularly given the banking system's geographic dispersion and the role of CBDC in improving access. The policy implication is that risks are conditional on adoption; they remain dormant but could scale rapidly if usage increases. Therefore, in The Bahamas, risks

are latent rather than realized, highlighting the importance of monitoring adoption dynamics rather than current impact.

3. Large, Diversified Economy (China – e-CNY)

In China, the relative importance of the transmission channels differs significantly due to structural factors. The liability channel is less destabilizing, as the banking system is large, state-supported, and less reliant on retail deposit volatility than in small economies. The fee-income channel is more prominent, but competition is primarily with dominant private payment platforms rather than banks themselves. The run-risk channel is mitigated by institutional controls, including capital restrictions and regulatory oversight. The information channel is particularly significant, as the CBDC enhances state visibility into transactions, potentially altering data distribution within the financial system. Therefore, in China, risks are absorbed or managed through scale, institutional control, and diversification, rather than amplified.

Overall Comparative Note

Across the three contexts, the same five transmission channels operate, but their systemic significance is structurally determined:

- Small economies (Jamaica, Bahamas):
Risks are amplified, especially through the liability and run-risk channels
- Large economies (China):
Risks are absorbed or reconfigured, with greater emphasis on system control and data dynamics

The analysis demonstrates that CBDCs do not inherently destabilize financial systems; rather, their impact depends on the interaction between design features and underlying economic structure. In small, bank-dependent systems, even

incremental adoption can have disproportionate systemic effects, whereas in larger, diversified economies, similar innovations may be absorbed within existing institutional and market buffers.

Question 8 (Learning Objective 3)

What safeguards did the Bank of Jamaica include in the design of JAM-DEX to protect the stability of the banking system?

The Bank of Jamaica incorporated several safeguards into the design of JAM-DEX to ensure that the digital currency would not disrupt the existing banking system. First, JAM-DEX was designed as a non-interest-bearing digital currency. By not paying interest, the digital currency was intended to function primarily as a medium of exchange rather than a savings instrument, thereby reducing the likelihood that consumers would move large balances out of bank deposits.

Second, the Bank of Jamaica adopted a hybrid distribution model. Under this model, JAM-DEX is issued by the central bank but distributed to consumers through commercial banks and other authorized financial intermediaries. This approach preserves the traditional two-tier financial system in which banks maintain customer relationships and provide financial services.

Third, wallet limits and simplified know-your-customer requirements were introduced to encourage transactional use while discouraging large-scale wealth storage in digital currency wallets.

Finally, JAM-DEX was integrated with Jamaica's existing real-time gross settlement system to ensure interoperability and avoid creating parallel payment infrastructures that could introduce operational or systemic risks.

Question 9 (Learning Objective 3)

Which risks appear to have been addressed through JAM-DEX's initial design, and which risks emerge only as second-order effects as adoption grows?

Students may approach this question from multiple perspectives. The initial design of JAM-DEX primarily addressed first-order risks related to direct competition with bank deposits and disruption of the financial system. By making the digital currency non-interest-bearing and distributing it through banks, the Bank of Jamaica

attempted to prevent large-scale deposit substitution and maintain the traditional two-tier financial architecture.

However, the case suggests that second-order system effects may arise as JAM-DEX adoption increases. These effects include gradual changes in depositor behavior, increased competition for transaction balances, and potential erosion of banks' fee income from payment services. These changes may not be immediately visible at the time of introduction, but could become significant as digital currency usage expands.

Second-order effects also include changes in crisis dynamics. Instant digital transfers could accelerate the movement of funds during periods of financial stress, potentially amplifying bank-run dynamics. Additionally, shifts in transaction data away from bank accounts could affect banks' informational advantages in credit allocation.

These systemic effects arise not from design flaws but from how financial systems adapt to new forms of money over time.

Question 10 (Learning Objective 3)

Why might systemic risks arise even when a central bank digital currency is intentionally designed not to compete with bank deposits?

Students may approach this question from multiple perspectives. Systemic risks can arise even when a digital currency is designed not to compete with bank deposits because financial systems evolve through behavioral responses and institutional adaptation. Although JAM-DEX was designed primarily as a medium of exchange rather than a store of value, its existence introduces a new form of sovereign money that can influence depositor expectations and financial behavior.

Even if most consumers continue to hold savings in bank accounts, the availability of a risk-free digital currency may reduce the perceived need to maintain transaction balances in banks. Over time, this can subtly affect deposit stability and funding costs. Banks may respond by adjusting pricing, lending strategies, or balance-sheet composition.

In addition, digital currency can alter crisis dynamics. The ability to convert bank deposits into digital currency quickly and easily may accelerate financial flows during periods of uncertainty. This does not necessarily cause instability, but it can change how financial shocks propagate through the system.

Therefore, systemic risks often arise not from direct deposit substitution but from gradual adjustments in behavior, incentives, and the structure of the financial system.

Question 11 (Learning Objective 4)

What economic and social benefits was the Bank of Jamaica hoping to achieve through the introduction of JAM-DEX?

The Bank of Jamaica introduced JAM-DEX to improve payment efficiency, promote financial inclusion, and modernize the country's payment infrastructure.

Digital currency can enable faster, more secure, and more cost-effective transactions compared with traditional cash-based systems. By reducing reliance on physical cash, JAM-DEX can lower transaction costs for both consumers and businesses.

Another key objective was financial inclusion. Digital wallets allow individuals without traditional bank accounts to participate in the digital economy, potentially expanding access to financial services for underserved populations. This is key in developing economies where segments of the population may face barriers to accessing formal banking services.

JAM-DEX also supports broader digital transformation goals by enabling the development of new financial technologies and payment platforms. These innovations could stimulate economic activity, improve government transfer programs, and strengthen Jamaica's position within the global digital financial ecosystem.

Question 12 (Learning Objective 4)

What trade-offs arise between promoting financial innovation and preserving financial stability?

Students may approach this question from multiple perspectives. Financial innovation can deliver significant benefits but often introduces new forms of risk. In the case of JAM-DEX, digital currency can improve payment efficiency and financial inclusion, but it may also affect commercial banks' stability by altering deposit behavior, payment revenues, and financial flows.

Promoting innovation may increase competition within the financial system, thereby improving efficiency and lowering costs for consumers. However, increased competition can also compress banks' profitability, potentially reducing banks' ability to build capital buffers and invest in risk management.

Central banks, therefore, face a delicate balance. Encouraging innovation is important for economic development, but policymakers must ensure that new technologies do not undermine the institutions that support financial stability. Effective policy requires careful design, ongoing monitoring, and the ability to adjust regulatory frameworks as financial systems evolve.

Question 13 (Learning Objective 5)

What additional policy or supervisory measures should the Bank of Jamaica consider to mitigate against potential financial stability risks associated with JAM-DEX?

To mitigate potential risks to financial stability, the Bank of Jamaica could adopt several policy and supervisory measures. First, the central bank should closely monitor deposit flows and liquidity conditions across the banking sector to detect early signs of changes in funding patterns. Enhanced data analysis could help identify emerging vulnerabilities.

Second, the Bank of Jamaica could incorporate digital currency scenarios into supervisory stress testing. These scenarios might examine how rapid conversion between deposits and digital currency could affect bank liquidity during periods of financial stress.

Third, policymakers could maintain flexibility in the design of JAM-DEX. For example, wallet limits or transaction thresholds could be adjusted if digital currency adoption begins to affect deposit stability. Finally, maintaining strong communication with financial institutions and the public is essential to ensure confidence in both the banking system and the digital currency framework.

Question 14 (Learning Objective 5)

Did the introduction of JAM-DEX make Jamaica's financial system more inclusive and stronger, or could it potentially inadvertently increase financial stability risks in Jamaica's commercial banking system?

Students should support their position using:

- Evidence from the case
- Financial intermediation theory
- The five transmission channels
- Jamaica's financial system structure

Students may reasonably reach different conclusions depending on how they weigh the benefits of inclusion against potential risks to financial stability. The introduction of Jamaica's central bank digital currency, JAM-DEX, represents a policy innovation intended to modernize the country's payment infrastructure and expand financial inclusion. However, as highlighted in the case, the decision also raises important questions about potential unintended consequences for financial stability. The overall assessment depends on how one weighs the benefits of digital innovation against possible changes in the structure and behavior of the banking system.

Arguments That JAM-DEX Strengthens the Financial System

One argument is that JAM-DEX has the potential to strengthen Jamaica's financial system by improving payment efficiency, expanding financial inclusion, and modernizing financial infrastructure.

- First, JAM-DEX provides a digital form of sovereign money, enabling individuals and businesses to conduct transactions electronically without relying exclusively on physical cash. In economies where digital payment adoption remains uneven, digital currencies can facilitate faster, more secure transactions while reducing the costs of handling physical currency. Greater efficiency in payments can lower transaction costs across the economy and improve the speed at which funds circulate.
- Second, digital currencies can enhance financial inclusion. Many individuals in developing economies remain outside the formal banking system due to barriers such as documentation requirements, geographic distance from bank branches, or minimum balance requirements. Digital wallets associated with digital currencies may allow individuals to participate in the digital financial ecosystem even if they do not hold traditional bank accounts. By expanding access to electronic payments and government transfers, digital currencies may help integrate previously underserved populations into the formal economy.

- Third, the design of JAM-DEX incorporated several safeguards intended to protect the stability of Jamaica's banking system. The currency was structured as a non-interest-bearing digital payment instrument rather than a savings vehicle, reducing the incentive for households to move large balances away from commercial banks. The Bank of Jamaica also adopted a hybrid distribution model in which banks and regulated intermediaries provide access to digital wallets, preserving the traditional two-tier structure of the financial system. These design choices reflect international best practices intended to ensure that digital currencies complement rather than replace commercial bank deposits.
- Finally, digital currencies can strengthen financial resilience by improving the reliability and efficiency of payment systems. In the long term, a modernized digital payment infrastructure may enhance economic productivity and support the growth of digital commerce and financial technology innovation.

From this perspective, JAM-DEX may represent a forward-looking policy initiative that enhances the efficiency, accessibility, and resilience of Jamaica's financial system while maintaining the central role of commercial banks.

Arguments That JAM-DEX Could Increase Financial Stability Risks

Despite these potential benefits, the introduction of JAM-DEX may also introduce new risks to financial stability through its interaction with the banking system.

- One concern relates to the liability structure of commercial banks. Banks rely heavily on retail deposits as a stable and relatively inexpensive source of funding. If households begin to hold a larger share of transaction balances in digital currency rather than bank deposits, banks could face a gradual erosion of their funding base. Even if these changes occur slowly, they may increase banks' funding costs or lead banks to rely more heavily on wholesale funding markets, which are typically more volatile.
- Changes in funding conditions could also affect bank lending behavior. If banks face higher funding costs or greater liquidity volatility, they may respond by tightening credit standards or increasing loan rates. In economies where commercial banks play a dominant role in credit allocation, such adjustments

could reduce credit availability for households and small businesses and potentially slow economic activity.

- Another concern relates to banks' revenue models. Payment services represent an important source of non-interest income for many banks. If digital currency transactions are free or low-cost, adoption could reduce banks' fee income from payments and related services. Declining fee income may affect bank profitability and reduce their ability to build capital buffers.
- The introduction of digital currency may also alter crisis dynamics. In traditional banking systems, physical constraints limit how quickly depositors can withdraw cash during periods of financial stress. Digital currencies that allow instant conversion between deposits and central bank money could accelerate withdrawals, making bank runs more rapid and harder for regulators to manage.
- Finally, digital currencies may affect the informational role of banks. Banks rely on transaction data from deposit accounts to monitor customers and assess credit risk. If payment activity increasingly occurs outside traditional bank accounts, banks may lose some informational advantages that support effective credit evaluation.

These potential effects do not necessarily imply that digital currency will destabilize the banking system, but they illustrate how subtle changes in financial behavior could accumulate over time.

Balanced Interpretation

The introduction of JAM-DEX, therefore, presents a classic policy trade-off between financial innovation and financial stability. On one hand, digital currency may enhance payment efficiency, financial inclusion, and economic modernization. On the other hand, the availability of digital central bank money could gradually reshape the incentives and balance-sheet dynamics of commercial banks.

Importantly, many of the potential risks associated with digital currencies are not immediate or direct but arise through second-order effects as financial institutions and consumers adjust their behavior over time. The careful design features incorporated into JAM-DEX, such as its non-interest-bearing structure and intermediary distribution model, reflect the Bank of Jamaica's attempt to mitigate these risks.

Ultimately, whether JAM-DEX strengthens or weakens Jamaica’s financial system will depend less on the initial design of the digital currency and more on how policymakers monitor its adoption, adapt regulatory frameworks, and respond to evolving financial behavior. In this sense, the introduction of JAM-DEX may be best viewed not as a one-time policy decision but as the beginning of an ongoing process of financial system adaptation.

Appendix A: Forward Looking Policy Paths

Policy Pillar	Core Objective	Key Tools / Levers	Financial Stability Focus	Trade-Off Considerations
1. Tiered CBDC Design	Control scale and use of CBDC without undermining adoption	• Holding limits (caps per wallet) • Tiered remuneration (0% → penalty rates at higher balances) • Adjustable transaction thresholds • Conversion frictions for large-value transfers	• Reduces risk of large-scale deposit migration • Limits flight-to-safety during stress • Preserves bank funding stability	• Too restrictive → weak adoption • Too flexible → higher systemic risk • Calibration must evolve with usage
2. Regulatory & Supervisory Adaptation	Strengthen resilience of banks as system structure evolves	• CBDC-integrated liquidity stress testing • Enhanced monitoring of deposit flows • Revised liquidity coverage requirements • Support for bank business model adaptation • Data governance frameworks	• Protects funding stability and lending capacity • Ensures banks remain viable intermediaries • Maintains credit allocation to real economy	• Over-regulation may stifle innovation • Under-regulation may amplify systemic risk • Requires coordination across regulators
3. Scenario-Based Policy Management	Prepare for multiple adoption and stress outcomes	• Scenario planning (low, moderate, high adoption) • Crisis-response playbooks (digital run scenarios) • Central bank liquidity backstops • Dynamic adjustment of CBDC parameters • Communication strategies	• Enhances readiness for rapid financial shifts • Reduces uncertainty during crises • Strengthens confidence in both CBDC and banks	• Difficult to predict adoption path • Policy responses may lag behavior • Communication missteps may trigger instability

Appendix B:

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative is grounded in the Jamaican context and the introduction of JAM-DEX, the underlying dynamics reflect recurring structural features observed across similar economies.

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding the dilemma and explaining how financial

vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points, including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures
- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations
- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best. In contrast, developed

economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

While this case is situated in Jamaica, its analytical relevance extends to other economies with similar structural characteristics, particularly:

- Small or medium-sized open economies
- Bank-dominated financial systems
- Limited capital market depth
- High exposure to external shocks
- Constrained monetary and regulatory policy space

Comparable contexts include economies such as The Bahamas (with the Sand Dollar) and other emerging markets exploring central bank digital currencies.

At the same time, comparisons with larger economies, such as China's Digital Yuan (e-CNY), highlight how the impact of CBDCs depends critically on structural factors such as scale, institutional capacity, and the role of banks within the financial system. In larger, more diversified economies, deeper financial markets and alternative payment ecosystems may absorb or mitigate the types of transmission effects that are more pronounced in smaller systems.

Importantly, the case should not be interpreted as universally generalizable across all economic environments. Instead, it offers an analytical generalization, illustrating how the introduction of a central bank digital currency can interact with the structure of a financial system to produce second-order effects that may not be immediately observable in early-adoption data.

In the context of JAM-DEX, this is particularly important. While adoption remains relatively limited, the case highlights that low usage does not eliminate risk. Rather, it may delay the manifestation of systemic effects, requiring policymakers to anticipate and manage potential financial stability implications before they become visible in aggregate data.

JAM-DEX: At the Edge of Stability

Evaluating the Potential Impact of Digital Currency Adoption on the Economics of Commercial Banks

“The problem is not that banks are fragile. The problem is that they are fragile by design.”

Mervyn King, Author, *The End of Alchemy: Money, Banking and the Future of the Global Economy* (2016)

Introduction

In late August 2025, Natalie Haynes, Deputy Governor of the Bank of Jamaica, sat in her Kingston office preparing for the morning’s briefings on Jamaica’s recently implemented digital currency (JAM-DEX). JAM-DEX appeared to have met its technical and regulatory objectives, yet one critical dimension remained uncertain: whether it was being widely used as money. The central bank’s digital currency was secure, legally sound, and carefully designed to avoid disrupting commercial banks. Yet, the data revealed that the supporting payments infrastructure appeared less developed than anticipated.

It was that oversight that unsettled Haynes, but for a deeper and very different reason. If the Bank of Jamaica had misjudged something as fundamental as the infrastructure required to facilitate the circulation of the digital currency, what else might it have missed? Even though the digital currency, JAM-DEX, was designed as a digital alternative to cash rather than a substitute for bank deposits,

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

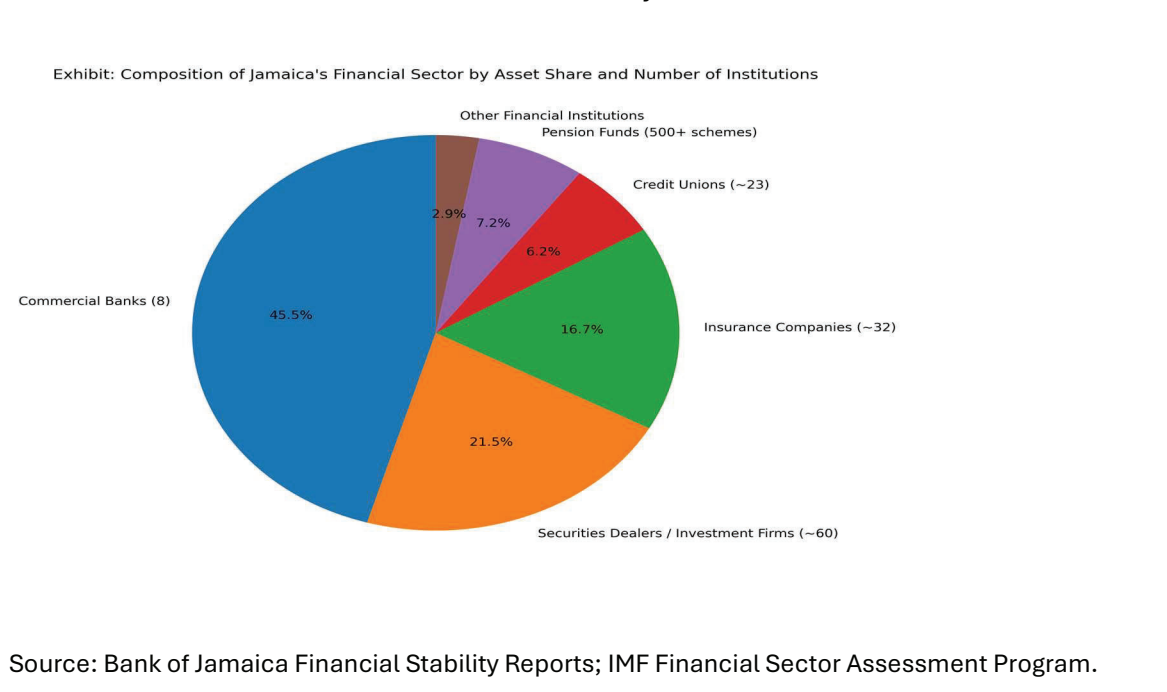
Haynes wondered whether the Bank of Jamaica had overlooked how a new form of sovereign money could quietly reshape banks' business models, balance sheets, and systemic risk.

The dilemma she now faced was increasingly clear. Did the introduction of JAM-DEX make Jamaica's financial system more inclusive and stronger, or had it inadvertently increased the very risks the central bank was meant to contain?

The Landscape of the Jamaican Financial Sector

Jamaica's financial system was characterized by its limited size, high concentration, and heavy reliance on commercial banking institutions¹. Commercial banks dominated payments, credit allocation, and liquidity provision. Their balance sheets relied heavily on retail deposits, primarily transaction accounts that provided low-cost, stable funding.

Exhibit 1. Estimated Distribution of Financial System Assets in Jamaica



The relatively small and highly concentrated nature of Jamaica's financial system was not accidental. It reflected decades of regulatory learning following Jamaica's

financial crisis of the 1990s, which had underscored the dangers of weak supervision, unstable funding, and loss of confidence. Since then, financial stability became the Bank of Jamaica's primary institutional mandate.

The Special Functions of Commercial Banks

The Bank of Jamaica was cognizant that commercial banks were not merely platforms for deposit accounts. They were institutions that performed the following specialized functions that supported the whole economy ². In financial intermediation theory, commercial banks perform several functions that distinguish them from other financial institutions.

- Liquidity transformation: turning short-term deposits into long-term lending
- Maturity transformation: funding longer-maturity loans (assets) with shorter-maturity liabilities
- Delegated monitoring: using transaction relationships and information advantages to allocate credit
- Payments infrastructure and trust: anchoring settlement for households and firms
- Monetary transmission: serving as conduits for central bank policy to affect the real economy

The Bank of Jamaica Design Philosophy: “Digital Cash,” Not a Bank Competitor

When the Bank of Jamaica publicly committed to exploring a digital currency, it emphasized that JAM-DEX was intended to function as a complement to, rather than a substitute for, commercial bank deposits. It would be a digital version of cash, legal tender, state-backed, widely usable, but not an interest-bearing savings instrument³.

In the *primer* she wrote for the public, Haynes explicitly stated that JAM-DEX would be issued within a regulated framework and integrated with Jamaica's existing financial market infrastructure.⁴

The model selected was a hybrid retail structure, meaning the Bank of Jamaica would issue JAM-DEX, but distribution to consumers would be through regulated intermediaries, namely commercial banks, other deposit-taking institutions, and authorized payment service providers.

The design had multiple safeguards intended to preserve stability. Jam-Dex would not earn interest. This ensured that it would not function as a savings instrument or compete directly with deposits as a store of value. There would be a hybrid distribution model⁵; therefore, the central bank would not offer retail accounts. Instead, JAM-DEX would be issued through commercial banks, building societies, and authorized payment service providers, preserving the two-tier financial system.

Additionally, digital currency wallets would be subject to limits and simplified KYC, reinforcing their use for transactions rather than wealth storage. Jam-Dex would also be integrated with Jamaica's real-time gross settlement system⁶ to avoid creating parallel settlement systems that could undermine stability, interoperability, and risk control. Finally, there would be one-to-one convertibility with physical Jamaican dollars,

The Potential Unintended Consequences of Digital Currency Adoption

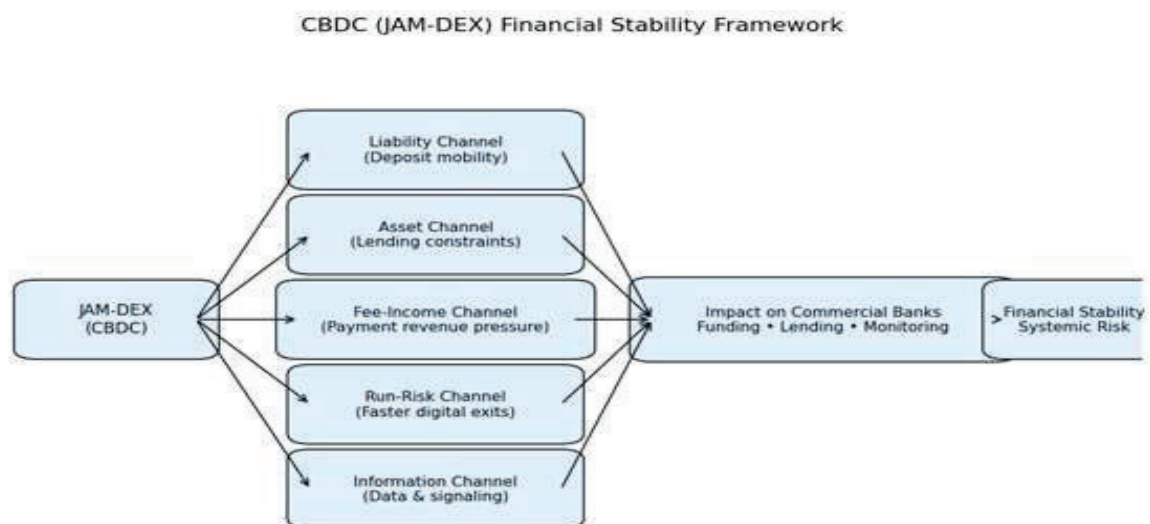
Haynes found herself reflecting on the role of commercial banks as financial intermediaries, their importance to any country's financial ecosystem, and how JAM-DEX might quietly reshape each of those special functions.

Banks' liabilities were built on trust and convenience and carried an inherent risk. In contrast, JAM-DEX represented a direct claim on the central bank, which may be perceived differently by depositors. Therefore, in a stressful situation,

depositors could, under certain conditions, reallocate funds toward perceived safety and immediacy, moving funds from bank deposits into digital currency wallets, especially if conversion is instant and widely accessible.

The questions raced through Haynes' mind. This raised questions about the potential stability of transactional deposits over time and whether widespread access to digital currency subtly raises banks' funding costs. This raised further questions about whether banks would respond by increasing reliance on wholesale or foreign funding. Her concern here was not mass disintermediation, but marginal changes that, at scale, could matter in a small system.

Exhibit 2. JAM-DEX Financial Stability Transmission Framework

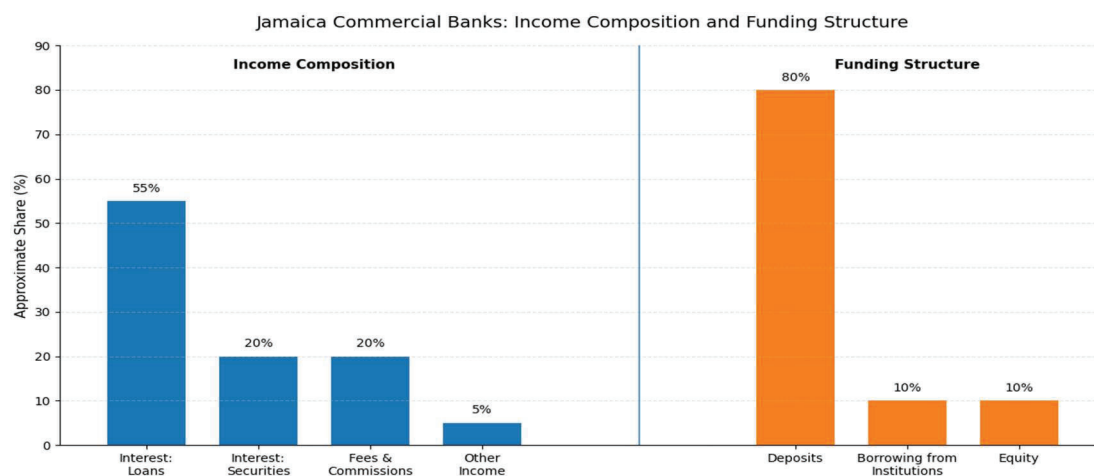


Source: Adapted from BIS and central bank literature on CBDC financial stability transmission mechanisms.

This concern led seamlessly to the thought that if funding structures evolved, asset decisions would follow. What were the implications for the price of credit and marginal borrowers if banks faced higher or more volatile funding costs? How would this change the banks' traditional role in credit allocation for small and medium

enterprises (SMEs) and households? How would this affect the asset composition in terms of tenure and risk level? Haynes slowly began to realize that JAM-DEX could change the economics of balance-sheet management. For a small economy where SMEs and households depend heavily on banks, even modest credit tightening could have macroeconomic consequences, and potentially feed back into bank asset quality.

Exhibit 3. Income Composition & Funding Structure of Jamaica's Commercial Banking Sector



Source: Bank of Jamaica *Financial Stability Reports*; IMF *Financial Sector Assessment Program (Jamaica)*

Her thoughts drifted on to the fee income channel. Payment services were a core source of non-interest income for Jamaican banks. While banks could innovate around digital currency wallets and value-added services, Jam-Dex transactions were designed to be free to end users. Haynes also recognized that JAM-DEX transactions could become the norm for the banking public, potentially influencing customer expectations regarding the pricing of payment services. What were the implications for the non-interest income and, by extension, the banks' profitability? Would this affect the banks' ability to build capital buffers? How would

this alter the risk tolerance of bankers, beholden to shareholders to constantly increase profits and returns?

Another point of vulnerability occurred to the Deputy Governor as her thinking evolved. She realized that although Jam-Dex was safe by design, that very design could change crisis dynamics. In traditional runs, withdrawing cash incurs physical friction, as account holders must go to banks or ATMs; however, JAM-DEX could reduce these frictions. What then were the implications for the response window for banks and regulators? Haynes understood that deposit insurance and lender-of-last-resort facilities still applied, but did speed matter in this modern financial system they created?

Finally, her thoughts came to rest on the informational advantage that transaction data embedded in deposit relationships provided for banks. As digital currency transactions grew, how would that affect banks, which serve as the chief collectors of borrower information and, by extension, their credit quality? This raised questions about how the distribution of information within the financial system might evolve.

Evidence from Other Early Adopters

A growing body of evidence from early adopters suggested that while central bank digital currencies (CBDCs) had not yet produced large-scale disruptions to banking systems, incipient effects across the five transmission channels were observable, albeit constrained by persistently low adoption rates.

In The Bahamas, the Sand Dollar saw very limited uptake, estimated at less than 1% of currency in circulation, due to weak merchant acceptance and limited integration with the banking infrastructure. Empirical studies indicated early signs of deposit substitution and reduced loan activity, suggesting potential pressure on the liability and asset channels if adoption scales up.⁷

In Nigeria, the eNaira had similarly experienced low adoption, driven by limited awareness, merchant apathy, and competition from existing digital payment platforms, with policymakers noting that risks such as disintermediation, bank-run dynamics, and weakened monetary transmission remain largely contingent on future uptake.⁸

Within the Eastern Caribbean Currency Union, DCash adoption was also modest, with broader studies highlighting infrastructure gaps, public education challenges, and weak incentives as key constraints, thereby limiting observable effects on banks' funding structures and payment revenues.⁹

Across these cases, the fee-income channel (through pressure on payment revenues), the information channel (via potential migration of transaction data), and the run-risk channel (through reduced withdrawal frictions) remained largely theoretical but increasingly plausible, while the liability and asset channels showed only marginal early movement due to low usage levels. Taken together, these experiences suggested that CBDCs had not yet materially altered banking economics, but they introduced latent structural risks that could become significant if adoption deepened¹⁰.

A Comparative Central Bank Digital Currency Context (See Appendix C)

Emerging evidence suggests that the impact of central bank digital currencies depends critically on the structure and scale of the underlying financial system. In small bank-centric economies such as Jamaica and The Bahamas, digital currencies like JAM-DEX and the Sand Dollar have been designed primarily to enhance financial inclusion and payment efficiency while preserving the role of commercial banks through hybrid distribution models. However, both systems have experienced relatively low adoption, largely due to limited merchant acceptance, infrastructure constraints, and competition from existing payment alternatives.

By contrast, China's digital Yuan (e-CNY), implemented within a much larger and state-coordinated financial ecosystem, has achieved significantly higher transaction volumes, supported by integration with dominant digital payment platforms and strong institutional backing. Importantly, the Chinese model operates within a financial system where large state-owned banks and platform eco-systems play a central role, potentially mitigating the degree of deposit competition observed in smaller economies.

Taken together, these comparisons suggest that while central bank digital currencies have not yet materially disrupted banking systems, their long-term implications for financial intermediation and stability are likely to depend on structural factors such as market size, payment infrastructure, and the relative role of banks within the financial system.

The Decision Point

Hayne's thoughts were a vivid reminder that systems behave in ways designers cannot fully control, and by the time she set down the briefing, the issue of inadequate infrastructure to facilitate adoption of the central bank's digital currency had faded into the background. While adoption challenges could potentially be addressed through policy adjustments, the implications for financial stability were less immediately observable and more difficult to assess.

Her thoughts were now centered on whether early signals warranted reassessing the critical consequences that could have arisen if JAM-DEX had achieved widespread adoption. She stared at the view of Kingston's harbor through her office window as she forced herself to evaluate her previous decision and asked herself the crucial question she had been struggling with: Did the introduction of JAM-DEX inadvertently increase the very risks the central bank was meant to contain?

Appendix A: Countries That Have Launched Central Bank Digital Currencies

This table shows that most central bank digital currency adopters are small economies (in the Caribbean and Africa). These economies often have bank-centric financial systems, similar to those in Jamaica. Jamaica’s decision was therefore part of a broader global policy experiment, not an isolated initiative.

Country / Currency Union	CBDC Name	Launch Year	Central Bank	Key Objective
Bahamas	Sand Dollar	2020	Central Bank of The Bahamas	Improve financial inclusion across remote islands and modernize payments
Nigeria	eNaira	2021	Central Bank of Nigeria	Expand digital payments and reduce reliance on cash
Eastern Caribbean Currency Union (ECCU)*	DCash	2021	Eastern Caribbean Central Bank	Improve regional payment efficiency across small island economies
Jamaica	JAM-DEX (Jamaica Digital Exchange)	2022	Bank of Jamaica	Promote financial inclusion and strengthen digital payment infrastructure

*ECCU members include Antigua & Barbuda, Dominica, Grenada, Montserrat, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, and Anguilla.

Appendix B: Additional Countries with Major CBDC Pilots

Country	CBDC Project	Status
China	Digital Yuan (e-CNY)	Large-scale pilot across multiple cities
India	Digital Rupee (₹)	Retail and wholesale pilot
Russia	Digital Ruble	Pilot testing with banks
Brazil	Drex (Digital Real)	Advanced pilot
United Arab Emirates	Digital Dirham	Cross-border pilot

As of 2024, over 130 countries representing about 98% of global GDP are exploring CBDCs, but only a few have fully launched them nationally.

Appendix C: Comparative Overview of Selected Central Bank Digital Currencies

Dimension	JAM-DEX (Jamaica)	Sand Dollar (Bahamas)	Digital Yuan (e-CNY) (China)
Year Launched	2022 (national rollout)	2020 (first fully deployed CBDC globally)	Pilot began 2020 (ongoing expansion)
Primary Policy Objective	Financial inclusion; payment efficiency; reduce cash usage	Financial inclusion across dispersed islands; payment system resilience	Payment system modernization; monetary sovereignty; platform competition
Economic Context	Small, open, bank-centric economy; concentrated financial sector	Small island economy; geographically fragmented; limited banking access in outer islands	Large, state-influenced economy; highly digitized payments ecosystem
CBDC Design Type	Retail, hybrid model (central bank issuance, private sector distribution)	Retail, hybrid model	Retail, two-tier system (central bank + commercial banks/platforms)
Interest Bearing	No	No	No
Role of Commercial Banks	Core intermediaries (wallet provision, distribution, integration)	Core intermediaries, though supplemented by payment providers	Significant but complemented by large fintech platforms (e.g., Alipay, WeChat Pay ecosystems)
Technology / Access Model	Mobile wallets; QR-based payments; interoperable with banking system	Mobile wallets; offline functionality emphasized for remote areas	Mobile wallets; integrated into existing digital payment super-apps
Adoption Levels	Early-stage; constrained by merchant acceptance and infrastructure gaps	Low adoption (<1% of currency in circulation); limited merchant usage	High transaction volumes, but adoption partly policy-driven and regionally uneven
Key Adoption Constraints	Limited merchant network; consumer inertia; competing digital payment methods	Infrastructure gaps; public awareness; limited incentives for usage	Competition with entrenched private platforms; user habit persistence
Implications for Banks – Liability Channel	Potential gradual deposit substitution (currently limited due to low adoption)	Minimal impact to date due to low usage	Limited direct impact; banking system remains structurally dominant
Implications for Banks – Fee Income	Potential pressure on payment fees if adoption scales	Limited impact to date	Significant competition with private payment platforms rather than CBDC itself
Run-Risk / Financial Stability Considerations	Faster potential deposit flight under stress due to digital convertibility	Theoretical risk; not observed due to low adoption	Managed through state control, capital restrictions, and system design
Information / Data Implications	Possible erosion of banks' transaction data advantage over time	Limited effect so far	Enhanced state visibility into transactions; data centralization
Overall Observed Impact on Banking System	No material disruption yet; risks remain latent and adoption-dependent	No material disruption; largely experimental phase	No systemic disruption; operates alongside dominant digital payment ecosystem

Source: Compiled from central bank publications (Bank of Jamaica; Central Bank of The Bahamas; People's Bank of China), IMF and BIS reports on CBDCs, and publicly available policy analyses and media reports (e.g., Reuters, IMF Working Papers on CBDC adoption).

Appendix D: The “Special” Nature of Commercial Banks in Financial Systems

Commercial banks occupy a unique position within modern financial systems. Unlike most other firms, banks perform several economic functions that are essential to the efficient operation of markets, the allocation of credit, and the stability of the financial system. For this reason, banks are often described in financial economics as “special” institutions. Their special status arises not from their legal form but from the combination of services they provide and the systemic importance of those services to households, firms, and governments.

Financial economists have long recognized that banks differ from other financial intermediaries because they issue widely accepted liabilities (deposits) that function as money while simultaneously holding longer-term and often illiquid assets such as loans. This role places banks at the center of financial intermediation and payment systems. As Diamond and Dybvig (1983)¹¹ explain in their seminal model of banking, banks facilitate liquidity creation by allowing depositors to withdraw funds on demand while investing those funds in longer-term projects that generate economic value. This process helps households maintain access to liquidity while enabling businesses to obtain the financing necessary for investment and growth.

Beyond liquidity creation, banks play a broader role in the financial system. Saunders and Cornett (2017)¹² note that banks serve as intermediaries that connect savers with borrowers while reducing information asymmetries, transaction costs, and monitoring burdens. Because banks interact continuously with their customers through deposit accounts, payment services, and lending relationships, they accumulate valuable information about borrower behavior and creditworthiness. This informational advantage allows banks to perform credit evaluation and monitoring functions that might otherwise be too costly for individual investors.

The importance of banks is also reflected in their role in the transmission of monetary policy and the functioning of payment systems. Commercial banks hold reserve balances with the central bank and serve as the primary channels through which changes in the policy interest rate affect lending conditions and economic activity. Additionally, banks provide infrastructure that allows households and businesses to transfer funds, settle transactions, and manage financial resources.

The special nature of banks has historically justified the extensive regulatory and supervisory frameworks that govern banking systems worldwide. Because banks are central to payment systems and credit markets, disruptions in banking activity can

have significant consequences for economic stability. As a result, governments typically provide deposit insurance, lender-of-last-resort facilities, and prudential supervision to safeguard the banking system and maintain public confidence.

Appendix E: The Core Functions of Commercial Banks

Although banks offer a wide range of financial services, several core economic functions explain their central role in financial systems.

Liquidity Transformation

Liquidity transformation refers to the ability of banks to provide depositors with immediate access to funds while investing those funds in longer-term assets such as loans and securities. Depositors are typically able to withdraw funds from checking or savings accounts at any time, even though the bank has invested much of those funds in loans that will be repaid over several years. This arrangement allows savers to maintain liquidity while enabling borrowers to access long-term financing.

Diamond and Dybvig (1983)¹³ demonstrate that this transformation of illiquid assets into liquid liabilities is one of the primary reasons banks exist. By pooling deposits from many customers, banks can manage withdrawal risk and provide liquidity to depositors while still supporting long-term economic investment.

Maturity Transformation

Closely related to liquidity transformation is maturity transformation. Banks typically fund longer-maturity loans, such as mortgages or business loans, using shorter-maturity liabilities such as deposits. This maturity mismatch allows banks to support long-term investment projects that might otherwise be difficult to finance through capital markets alone.

Maturity transformation helps smooth the allocation of savings across time by allowing households to maintain short-term financial flexibility while providing borrowers with longer repayment horizons. However, this function also introduces risks that require careful liquidity management and regulatory oversight.

Delegated Monitoring and Credit Allocation

Another important function of commercial banks is delegated monitoring. Individual savers typically lack the expertise or resources to evaluate the creditworthiness of borrowers directly. Banks perform this role on behalf of depositors by screening loan applicants, structuring loan contracts, and monitoring borrower behavior after loans are issued.

Diamond (1984) describes banks as delegated monitors because they specialize in collecting and analyzing information about borrowers. This function reduces information asymmetries in financial markets and improves the allocation of capital by directing funds toward productive investments.

Payment and Settlement Services

Commercial banks also provide the infrastructure that enables individuals and businesses to transfer funds and settle transactions. Payment services include deposit accounts, electronic transfers, card payments, and other financial instruments used for everyday transactions.

Efficient payment systems are critical to economic activity because they allow funds to move quickly and reliably between participants in the economy. Banks typically operate within a broader payment infrastructure that includes central bank settlement systems and financial market utilities.

Monetary Policy Transmission

Banks play an important role in the transmission of monetary policy. Central banks influence economic activity by adjusting policy interest rates and liquidity conditions within the banking system. Commercial banks then transmit these policy changes to households and businesses through lending rates, deposit rates, and credit availability.

Because banks are the primary intermediaries between the central bank and the real economy, their balance sheets and lending behavior strongly influence how monetary policy affects investment, consumption, and overall economic growth.

Appendix F: How Central Bank Digital Currencies Work

Central bank digital currencies are relatively recent developments in monetary systems and are digital forms of sovereign currency issued by a country's central bank. Unlike privately issued digital payment instruments or cryptocurrencies, digital currency is a direct liability of the central bank and therefore carries the same

legal status as physical currency (cash). Digital currencies are typically designed to complement existing forms of money, such as banknotes, coins, and commercial bank deposits, rather than replace them.¹⁴

The growing interest in digital currencies reflects several global developments, including the rapid digitization of payments, declining use of physical cash in some economies, advances in financial technology, and concerns among policymakers about maintaining the effectiveness of monetary systems in an increasingly digital financial landscape. Central banks around the world have explored digital currencies to modernize payment systems, improve financial inclusion, enhance payment efficiency, and ensure continued public access to central bank money.¹⁵

Appendix G: Types of Central Bank Digital Currency

Central bank digital currencies are generally categorized into two broad types depending on who can use them.¹⁶

Wholesale CBDC

Wholesale digital currencies are designed for use by financial institutions, such as commercial banks, rather than the public. These systems are typically used to improve the efficiency of interbank payments and financial market settlements. In many cases, wholesale digital currency systems resemble existing central bank reserve systems but incorporate new digital technologies to improve speed, security, and transparency.

Retail CBDC

Retail digital currencies are designed for use by the general public, households, and businesses as digital cash. Retail digital currencies allow individuals to hold and transfer central bank money electronically, potentially through mobile applications or digital wallets. Retail digital currencies are the focus of most policy discussions because they directly affect how people make payments and store value in the financial system.

Appendix H: Key Design Features of Retail CBDCs¹⁷

Central banks designing retail digital currencies must make several key policy and technical decisions. These design features influence how CBDCs function within the financial system.

Issuance Structure

One important design decision concerns how digital currencies are distributed to the public. Many central banks have adopted a two-tier or hybrid model, in which the central bank issues the digital currency, but commercial banks or regulated payment providers distribute it to users. Under this arrangement, the central bank manages the core infrastructure while private financial institutions handle customer-facing services.

Interest Treatment

Central bank digital currencies may be designed either to pay interest or to function like cash, which does not earn interest. Many central banks have indicated that retail digital currencies would likely be non-interest-bearing if the goal is to create a digital payment instrument rather than a savings vehicle.

Wallet and Account Structures

Retail digital currencies are typically accessed through digital wallets or accounts that allow users to store and transfer digital currency. These wallets may be offered by banks, payment service providers, or other regulated financial intermediaries.

Wallet systems may include limits on balances or transaction sizes, depending on policy objectives such as financial stability, anti-money laundering compliance, or payment system design.

Convertibility

Central bank digital currencies are generally designed to be fully convertible at par value with physical cash and commercial bank deposits. This means that one unit of digital currency equals one unit of the national currency and can be exchanged without loss of value.

Payment Infrastructure Integration

For central bank digital currencies to function effectively, they must integrate with existing payment systems. This includes connections to central bank settlement systems, electronic payment networks, and financial institutions that facilitate transactions between users.

Potential Policy Objectives of CBDCs

Central banks exploring digital currencies have identified several potential policy objectives. These objectives vary across countries depending on local economic and financial conditions.

Some commonly cited objectives include:

- improving payment efficiency and reducing transaction costs
- expanding access to digital financial services for underserved populations
- enhancing the resilience and security of payment systems
- supporting innovation in financial technology
- preserving public access to central bank money in a digital economy

.At the time of the decision, empirical evidence on the long-term banking impact of CBDCs remained limited.

Notes

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- ¹ Bank of Jamaica, *Financial Stability Report* (various years); International Monetary Fund, *Jamaica Financial System Stability Assessment (FSAP)*.
- ² Saunders, A., & Cornett, M. M. (2017). *Financial institutions management: A risk management approach* (9th ed.). McGraw-Hill Education.
- ³ Bank of Jamaica. (n.d.). *Bank of Jamaica mints first batch of Jamaica's central bank digital currency*. <https://boj.org.jm/boj-mints-first-batch-of-jamaicas-central-bank-digital-currency/>
- ⁴ Bank of Jamaica. (n.d.). A primer on BOJ's central bank digital currency. <https://boj.org.jm/a-primer-on-bojs-central-bank-digital-currency/>
- ⁵ Bank of Jamaica. (n.d.). *Bank of Jamaica's CBDC solution*. <https://boj.org.jm/bank-of-jamaicas-cbdc-solution/>
- ⁶ Bank of Jamaica. (n.d.). *Payment systems and infrastructure*. <https://boj.org.jm/core-functions/payment-systems/>
- ⁷ Reuters (2024) *Bahamas Sand Dollar adoption data*
- ⁸ Central Bank of Nigeria / NDIC (2024) *eNaira and Financial System Implications*
- ⁹ IMF (2024) *Central Bank Digital Currency Adoption*
- ¹⁰ Giraldo-Gordillo (2026) *CBDCs and Liquidity Risks*
- ¹¹ Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *Journal of Political Economy*, 91(3), 401–419
- ¹² Saunders, A., & Cornett, M. M. (2017). *Financial institutions management: A risk management approach* (9th ed.). McGraw-Hill Education
- ¹³ Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *Review of Economic Studies*, 51(3), 393–414.
- ¹⁴ Bank for International Settlements. (2021). *Central bank digital currencies: Foundational principles and core features*. BIS.
- ¹⁵ Bank for International Settlements. (2023). *CBDC and the future monetary system*. BIS Annual Economic Report
- ¹⁶ Auer, R., Cornelli, G., & Frost, J. (2020). Rise of the central bank digital currencies: Drivers, approaches and technologies. *BIS Working Papers*
- ¹⁷ International Monetary Fund. (2023). *Central bank digital currencies: Policy, design, and implications*. IMF.

When Markets and Fundamentals Diverge: Efficiency vs Sentiment NCB Financial Group - The Chairman's Dilemma Instructor Note

Case Synopsis

This case examines the sharp divergence between the fundamental valuation and market pricing of NCB Financial Group Limited (NCBFG), Jamaica's largest and systemically important financial institution. Despite reporting strong profitability, robust capital adequacy, and rising equity in 2025, NCBFG's share price collapsed to multi-year lows, culminating in a trading halt triggered by minimal trading volume.

At the center of the case is Chairman and controlling shareholder Michael Lee-Chin, who was under pressure from public calls for him to step aside as chairman. For Lee-Chin, the stakes were personal as much of his wealth was tied to his holdings in NCBFG, and as the share price declined, so too did the value of his personal fortune. Restoring that wealth quickly had become an urgent priority, and now he faced a difficult decision.

Some market participants viewed a leadership change as potentially influencing investor perceptions. However, such a move would implicitly acknowledge that investor psychology and market sentiment, rather than underlying fundamentals, were driving the company's valuation.

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

Alternatively, Lee-Chin could remain as chairman and allow the bank's financial performance to speak for itself. A long-time believer in the Efficient Market Hypothesis, he expected that continued strong results would eventually be reflected in the company's share price. If markets were efficient, the share price should eventually converge toward its intrinsic value as new financial information became available.

Both choices carried the possibility of restoring his diminished personal wealth, but Lee-Chin remained uncertain which force would dominate in the short run, investor sentiment or market efficiency, and which path would lead more quickly to a recovery in the value of his NCBFG holdings.

The case challenges students to reconcile:

- Efficient Market Hypothesis (EMH)
- Market microstructure and liquidity
- Behavioral finance

It is about whether market prices in small, illiquid markets reliably convey information or are distorted by microstructure weaknesses and behavioral forces. Traditional finance suggests that the price of all available information should be reflected in stock prices for the markets to be deemed efficient, and while developed countries often manifest this, finance students in smaller countries with smaller equity markets may not be clear on whether price distortions that may occur in their market are a manifestation of poor market microstructure, market inefficiency, irrational behavior or a combination of all three and to what degree.

Intended Audience, Recommended Courses, and Placement

This case is intended for graduate-level students of Investments, Corporate Finance, or Financial Institutions Courses. It is suitable for use in MBA, MSc Finance, and Executive Education programs. The case is therefore ideal for teaching Efficient Market Hypothesis (EMH), market microstructure, and behavioral finance in emerging markets.

Learning Objectives

After completing this case, students should be able to:

1. Apply the Efficient Market Hypothesis (EMH) to evaluate whether NCB Financial Group's share price reflects the firm's underlying financial fundamentals.
2. Understand how market microstructure and liquidity constraints can influence price discovery in thin equity markets.
3. Evaluate how behavioral finance factors such as investor sentiment, narratives, and perceived risks can influence asset prices even when fundamentals remain strong.
4. Compare the explanatory power of EMH, market microstructure, and behavioral finance in explaining the divergence between NCBFG's financial performance and its share price.
5. Evaluate the speed at which different market forces influence price adjustment in emerging markets.
6. Evaluate how advancements in market infrastructure, including digital trading platforms, increased liquidity, and enhanced regulatory oversight, can improve price discovery in thin equity markets, and assess the implications of these developments for the efficiency of financial markets in emerging economies

Suggested Teaching Outline

Instructor Activity	Time
Begin with a quick show of hands or poll asking students whether NCBFG appears undervalued overvalued or correctly priced.	10 min
Direct students to the exhibits showing profits, book value, and capital strength. Ask students to interpret the financial indicators.	15 min
Introduce the Efficient Market Hypothesis. Ask students whether the observed price behavior is consistent with EMH. Encourage students to argue both sides.	15 min
Shift focus to the structure of the Jamaica Stock Exchange. Discuss liquidity, market depth, and the trading halt triggered by small trades.	15 min
Discuss behavioral finance. Introduce investor sentiment and narratives. Ask students how Lee-Chin's pledged shares and personal debt could influence investor behavior.	15 min
Present Lee-Chin's dilemma and divide the class into two groups: Step Aside vs Stay Chairman. Ask each group to defend its recommendation.	15 min
Wrap up. Summarize key insights from each framework and highlight that multiple explanations may coexist. Revisit the initial poll and ask if opinions have changed.	5 min
	90 min

Discussion Questions

1. To what extent does the decline in NCB Financial Group's share price between 2019 and 2025 challenge the predictions of the Efficient Market Hypothesis (EMH)? Distinguish between semi-strong and behavioral deviations.
2. How might the structure and liquidity characteristics of the Jamaica Stock Exchange influence the price discovery process for NCBFG shares?
3. To what extent might investor sentiment and behavioral biases explain the divergence between NCBFG's financial fundamentals and its market valuation?
4. Which framework, Efficient Market Hypothesis, market microstructure, or behavioral finance, provides the most convincing explanation for the observed pricing of NCBFG shares? Support your conclusion using evidence from the case.

5. How might developments such as digital trading platforms, increased market liquidity, and enhanced regulatory oversight improve price discovery in thin equity markets like Jamaica?

6. As Michael Lee-Chin, which course of action is more likely to restore the value of your personal wealth in the shortest time frame: stepping aside to catalyze a shift in investor sentiment, or remaining as chairman in reliance on the eventual convergence of market price and fundamental value?

Class Activity to Anchor Concepts Prior to Case Discussion: Markets in Everyday Life

Objective: To help students realize that market inefficiencies are observable in everyday economic behavior, not just financial markets.

Ask students to think of everyday markets they interact with, such as ride-share “surge pricing”, airline tickets, resale markets (concert tickets, sneakers, electronics).

In small groups, ask them to identify and report back examples where:

- Prices reflect all available information (EMH)
- Prices driven by hype or narrative (Behavioral finance)
- limited supply or thin markets distort price (Market Microstructure)

Discussion and Analysis

Question 1: *(Linked to Learning Objective 1)*

To what extent does the decline in NCB Financial Group’s share price between 2019 and 2025 challenge the predictions of the Efficient Market Hypothesis (EMH)?

In conducting their analysis, students should consider the relationships between the bank’s profitability, capital adequacy, book value growth, and market valuation. They should use the

exhibits provided in the case to determine whether the observed divergence between fundamentals and the share price suggests market inefficiency or rational risk pricing.

EMH interpretation

Under the semi-strong form of EMH, stock prices should reflect all publicly available information, including earnings, capital adequacy, and balance sheet strength. In the NCBFG case, the bank remained profitable, maintained strong capital buffers, and increased its equity base, yet its share price fell sharply. At face value, this appears inconsistent with semi-strong efficiency because strong public fundamentals did not translate into stronger prices.

However, a semi-strong EMH defense would argue that the market may have been incorporating other publicly knowable risks, not just current accounting performance. Investors may have rationally priced in the risk that Lee-Chin's pledged shares could eventually be enforced, leading to a future supply shock. They may also have been discounting uncertainty around market confidence, future earnings quality, or reputational spillovers. From this perspective, the falling price does not necessarily disprove EMH; it may instead reflect the market's forward-looking assessment of risk.

Behavioral deviation

The behavioral interpretation is different. Here, the decline suggests that prices may have moved beyond rational risk pricing into narrative-driven overreaction. Investor attention may have become overly focused on Lee-Chin's personal debt and the symbolism of pledged shares, even though those liabilities were not on NCBFG's balance sheet. Salience, loss aversion, and herding could all have amplified the decline. If investors overweighted visible downside scenarios and ignored the bank's continued profitability and capital strength, then the price behavior reflects a behavioral deviation from EMH.

Conclusion

The most convincing interpretation is that the case reflects both semi-strong and behavioral elements. The market may have rationally incorporated future risks, but behavioral factors

likely magnified the discount and prolonged the divergence from intrinsic value. Thus, the case does not fully reject EMH, but it does expose its limits in a thin emerging market where public information, investor psychology, and structural frictions interact.

Question 2: *(Linked to Learning Objective 2)*

How might the structure and liquidity characteristics of the Jamaica Stock Exchange influence the price discovery process for NCBFG shares?

Students should specifically discuss how thin trading volumes, limited market depth, and the possibility of large share blocks entering the market could affect the reliability of observed market prices as signals of intrinsic value.

Market microstructure interpretation

Market microstructure focuses on how prices are formed through actual trading processes. In the NCBFG case, the Jamaica Stock Exchange appears to be a critical part of the explanation. The JSE is relatively small compared with large developed exchanges, and trading in many securities is thin. When liquidity is limited, price discovery becomes more fragile because the marginal trade can exert outsized influence on the quoted price.

The case provides a vivid example: only a very small number of shares trading at lower prices triggered a trading halt. In a deeper market, a few small trades would likely have little lasting effect because many other buyers and sellers would quickly absorb the order flow. But in a thin market, the lack of depth means that price can move sharply even when the information content of the trade is minimal.

Implications for price discovery

This means the observed market price may not always represent a broad, consensus valuation of the firm. Instead, it may reflect:

- temporary imbalances between buyers and sellers,

- the timing of trades,
- expectations about liquidity itself, and
- fear of future block sales.

The large quantity of shares pledged by Lee-Chin's related entities further complicates price discovery. Even if no shares are immediately sold, the expectation that a large supply overhang could materialize may cause investors to discount the stock preemptively.

Conclusion

The structure of the JSE likely weakened the reliability of price as a clean signal of intrinsic value. In this case, thin liquidity and limited market depth may have amplified price movements and contributed to a valuation discount that was larger and more persistent than fundamentals alone would imply. This does not mean price discovery failed entirely, but it does mean that market structure likely distorted the speed and precision with which information was incorporated into the stock price.

Question 3: *(Linked to Learning Objective 3)*

To what extent might investor sentiment and behavioral biases explain the divergence between NCBFG's financial fundamentals and its market valuation?

Students should consider how narratives surrounding Michael Lee-Chin's pledged shares and his difficulties servicing his personal debt obligations may influence investor perceptions, even though those obligations are not liabilities of the bank itself.

Behavioral finance interpretation

Behavioral finance provides a strong explanation for the divergence between NCBFG's fundamentals and its market valuation. The bank remained profitable and well-capitalized, yet the share price continued to weaken. This suggests that investors may not have been responding only to financial statements, but also to narratives, perceptions, and salient risks.

The case indicates that investor attention became focused on Lee-Chin's personal debt obligations and the fact that a large portion of his NCBFG shares had been pledged as collateral. Even though those obligations were not liabilities of the bank, investors could have interpreted them as a proxy for instability. Behavioral finance suggests that markets can overweight highly visible, emotionally charged risks, especially when uncertainty is elevated.

Relevant biases

Several biases may have been at work:

- **Salience bias:** Investors focused on the dramatic story of pledged shares and personal debt.
- **Herding:** Once some investors began selling, others may have followed without independently reassessing the bank's fundamentals.
- **Overreaction:** The market may have extrapolated a potential future share overhang into a current valuation collapse.
- **Loss aversion:** Investors already suffering price declines may have sold more aggressively to avoid further losses.

Limits of the behavioral explanation

Behavioral finance should not be used to imply that the entire decline was irrational. Some concern about future supply shocks was legitimate. But the persistence and magnitude of the market discount relative to book value suggest that sentiment likely pushed the price below what fundamentals alone would justify.

Conclusion

Investor sentiment and behavioral biases likely explain a substantial part of the divergence. The case shows how market narratives can dominate objective financial performance, particularly in smaller markets where prices are more sensitive to shifts in confidence. Behavioral finance therefore appears highly relevant, though best understood as interacting with, rather than fully replacing, other explanations.

Question 4: *(Linked to Learning Objective 4)*

Which framework, Efficient Market Hypothesis, market microstructure, or behavioral finance, provides the most convincing explanation for the observed pricing of NCBFG shares? Support your conclusion using evidence from the case.

The divergence between NCBFG's financial performance and its share price can be interpreted through multiple theoretical frameworks. EMH explanation

The EMH explanation has merit because investors may have been rationally incorporating risks beyond current earnings and capital adequacy. The possibility that pledged shares could eventually be enforced represents a genuine future risk. If investors expected a supply shock, a lower current price could be rational.

Market microstructure explanation

Market microstructure is also compelling. The case explicitly documents that minimal trading volume triggered a trading halt, which strongly suggests that the observed price was influenced by market thinness rather than by deep, information-rich trading. The smaller and less liquid the market, the more likely that order flow rather than fundamentals will dominate short-term price movements.

Behavioral explanation

Behavioral finance arguably provides the richest explanation for the persistence and intensity of the discount. The narrative around Lee-Chin's personal debt and pledged shares seems to have taken on symbolic power. Investors may have overweighted these concerns and underweighted the bank's profitability, capital strength, and rising equity.

Most convincing overall explanation

The strongest answer is not a single framework, but a combination led by market microstructure and behavioral finance, with EMH still partially present. EMH explains why some discount may have been rational; market microstructure explains why price moves

may have been exaggerated in a thin market; behavioral finance explains why the discount may have persisted and deepened beyond what a purely rational framework would predict.

Conclusion

If forced to choose one dominant explanation, market microstructure combined with behavioral finance is the most convincing. The case evidence, especially the trading halt due to very limited volume and the persistent market focus on Lee-Chin's personal debt, suggests that the price was being shaped less by a smooth incorporation of fundamentals and more by structural fragility and investor narrative. EMH remains relevant, but it is insufficient on its own to explain the full pricing pattern.

Question 5 (Linked to Learning Objective 6)

How might developments such as digital trading platforms, increased market liquidity, and enhanced regulatory oversight improve price discovery in thin equity markets like Jamaica?

Thin equity markets, such as the Jamaica Stock Exchange, are particularly susceptible to distortions in price discovery due to limited liquidity, concentrated ownership, and relatively low trading volumes. Developments in digital trading infrastructure, liquidity enhancement mechanisms, and regulatory frameworks have the potential to significantly reshape how prices are formed in such markets.

First, the expansion of digital trading platforms can broaden market participation by reducing transaction costs and increasing access for both retail and institutional investors. Greater participation increases the number of buyers and sellers in the market, thereby improving market depth. From a market microstructure perspective, this reduces the likelihood that small trades will disproportionately affect prices, as seen in the NCBFG case where minimal trading volume triggered significant price movements. Over time, this can lead to more stable and informative prices.

Second, increased liquidity, whether through market-making mechanisms, cross-listings, or greater institutional participation, enhances the efficiency of price discovery. In more liquid markets, information is incorporated into prices more rapidly because there are more transactions reflecting diverse investor views. This strengthens the predictions of the Efficient Market Hypothesis, as prices are more likely to reflect available information rather than temporary imbalances in supply and demand.

Third, enhanced regulatory oversight can improve investor confidence by ensuring transparency and reducing information asymmetry. Clear disclosure requirements regarding pledged shares, related-party transactions, and risk exposures can reduce uncertainty and limit the influence of speculative narratives. This may mitigate the impact of behavioral biases, as investors rely more on verified information rather than market rumors or perceptions.

However, while these developments can improve market efficiency, they do not eliminate behavioral influences entirely. Even in highly liquid and technologically advanced markets, investor sentiment and narratives continue to affect prices, particularly in the short term. What these improvements can do is reduce the magnitude and persistence of mispricing.

For emerging markets, the implications are significant. As market infrastructure improves, these markets may transition from environments where microstructure constraints and sentiment dominate, to ones where fundamentals play a more central role in price formation. This evolution can enhance capital allocation efficiency, attract foreign investment, and improve overall market stability.

In the context of the NCBFG case, such developments could reduce the likelihood that a small number of trades or investor narratives disproportionately influence the share price. Over time, this would increase the probability that the bank's market valuation converges more closely with its underlying financial performance.

Question 6

As Michael Lee-Chin, which course of action is more likely to restore the value of your personal wealth in the shortest time frame: stepping aside to catalyze a shift in investor sentiment, or remaining as chairman in reliance on the eventual convergence of market price and fundamental value?

Framing the Decision.

Lee-Chin's dilemma is not simply whether to step aside or remain chairman, but rather which mechanism is most likely to restore the share price, and therefore his personal wealth, most quickly. The decision hinges on the relative speed of three forces:

1. Fundamental convergence (EMH)
2. Market structure (liquidity and trading dynamics)
3. Investor sentiment (behavioral finance)

1. EMH Interpretation: Fundamentals Will Prevail — But Slowly

Under the semi-strong form of the Efficient Market Hypothesis, the market should eventually incorporate all publicly available information into the stock price. NCBFG's continued profitability, strong capital adequacy, and growing book value suggest that its intrinsic value remains intact.

From this perspective, remaining the chairman is consistent with the belief that the price will converge to the value over time. If the bank continues to perform well, the market should ultimately recognize that performance.

However, EMH does not specify how quickly this adjustment occurs. In markets with liquidity constraints or dominant narratives, price convergence may be delayed. Thus, while remaining chairman may be optimal from a long-term valuation perspective, it may not achieve the objective of rapid wealth restoration.

2. Market Microstructure: Liquidity Constraints Distort Price Signals

Market microstructure theory highlights that price formation depends not only on information but also on how trades occur. In the case of the Jamaica Stock Exchange, limited liquidity and market depth mean that prices can be heavily influenced by small trades and expectations about order flow.

The trading halt triggered by minimal volume suggests that the observed price may not fully reflect a broad consensus of investors. Instead, it may reflect fragile price discovery, where the marginal trade exerts disproportionate influence.

In this context, remaining chairman does little to address the structural issue. Even if fundamentals improve, thin liquidity may slow the transmission of that information into price. Thus, microstructure effects weaken the case for relying solely on fundamentals to drive a rapid recovery.

3. Behavioral Finance: Sentiment as the Fastest Transmission Mechanism

Behavioral finance offers the strongest explanation for the speed dimension of the problem. The case indicates that Lee-Chin himself has become part of the market narrative. His personal debt and the pledging of shares have created a salient, highly visible risk, which investors may be overweighting.

If leadership has become a “priced factor,” then changing leadership could produce an immediate shift in sentiment. Unlike fundamentals, which are revealed gradually through earnings, sentiment can change abruptly in response to a clear signal.

Stepping aside would therefore act as a catalyst, potentially:

- reducing perceived risk,
- weakening the dominant negative narrative,
- and encouraging investors to reassess the stock.

In a thin market, such a shift in sentiment could translate into a rapid price adjustment, as even modest buying pressure could push the price upward.

4. Recommendation

If the objective is to restore personal wealth as quickly as possible, stepping aside as chairman is the more effective strategy. This is because:

- The current pricing environment appears to be dominated by sentiment and structural constraints, not purely fundamentals
- A leadership change directly targets the behavioral channel, which is the fastest-moving mechanism
- In a thin market, even a modest shift in sentiment can produce disproportionately large price movements

Remaining chairman may ultimately lead to price recovery, but it relies on slower-moving mechanisms—earnings performance and gradual information incorporation.

5. Conclusion

The decision reflects a trade-off between speed and principle:

- Remaining chairman aligns with confidence in market efficiency and long-term value convergence
- Stepping aside leverages behavioral dynamics to accelerate short-term price adjustment

Given the urgency of restoring personal wealth, the more compelling choice is to step aside temporarily, recognizing that in this context, markets are being driven less by fundamentals and more by sentiment interacting with structural constraints.

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative focuses on the divergence between the market valuation and the financial fundamentals of NCB Financial

Group, the underlying dynamics reflect structural features common to thin, less-liquid capital markets.

High-Level Insights from the Case Series

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding the dilemma and explaining how financial vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points, including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures
- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations

- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best.

In contrast, developed economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

Although this case is situated in Jamaica, its analytical relevance extends to other financial markets that share similar structural characteristics, including:

- Emerging and frontier equity markets
- Exchanges with limited liquidity and trading depth
- Markets characterized by concentrated ownership structures
- Financial systems where a small number of firms dominate market capitalization

These conditions are common across many developing economies in the Caribbean, Africa, and parts of Asia, where market microstructure plays a more prominent role in price formation than in larger, more liquid markets.

At the same time, comparisons with larger, more developed markets highlight important structural differences. In deeper markets with higher liquidity, broader investor participation,

and more advanced trading infrastructure, price discovery tends to be more robust, and the influence of individual trades or dominant narratives is more likely to be absorbed rather than amplified.

Importantly, this case should not be interpreted as evidence that markets are universally inefficient. Instead, it demonstrates that the extent to which prices reflect fundamentals depends critically on market structure. In thin markets, prices may incorporate information more slowly, less precisely, or in ways influenced by liquidity constraints and investor sentiment.

This case, therefore, offers analytical generalization, illustrating how the interaction between market microstructure, behavioral dynamics, and informational efficiency can produce persistent divergences between price and value.

In this context, the NCBFG dilemma is not unique. It represents a broader class of situations in which decision-makers must operate in markets where prices are shaped not only by fundamentals, but also by structural and behavioral forces that influence the speed, direction, and magnitude of price adjustment.

Appendix A

Theoretical Foundations: Understanding Market Pricing in the NCBFG Case

This appendix provides the theoretical grounding for analyzing the divergence between NCB Financial Group's financial performance and its market valuation. The case can be interpreted through three complementary frameworks: the Efficient Market Hypothesis (EMH), Behavioral Finance, and Market Microstructure Theory.

1. Efficient Market Hypothesis (Fama, 1970)

The Efficient Market Hypothesis (EMH), as developed by Eugene F. Fama, posits that security prices fully reflect available information. In its semi-strong form, EMH suggests that all publicly available information—including financial statements, earnings reports, and macroeconomic data—is rapidly incorporated into stock prices.

Key Implications:

- It is difficult to consistently achieve abnormal returns using public information.
- Prices reflect both current fundamentals and expectations of future performance.
- Apparent mispricing may reflect information not immediately visible in financial statements.

Application to the Case:

In the NCBFG case, EMH provides one possible explanation for the decline in share price. Although the bank reported strong profitability and capital adequacy, investors may have incorporated forward-looking risks, such as:

- The potential enforcement of pledged shares
- Anticipated supply shocks in a thin market
- Uncertainty surrounding investor confidence

From an EMH perspective, the observed price decline may therefore represent rational pricing of risk, rather than market inefficiency.

2. Behavioral Finance (Shleifer, 2000)

Behavioral finance, as articulated by Andrei Shleifer, challenges the assumption of fully rational investors. It argues that psychological factors, biases, and narratives can influence financial decision-making and, consequently, asset prices.

Key Concepts:

- Investor sentiment: Prices may be influenced by optimism or pessimism
- Overreaction and underreaction: Markets may deviate from intrinsic value
- Narrative dominance: Salient stories can drive investor behavior

Application to the Case:

In the NCBFG context, investor concerns surrounding Michael Lee-Chin's personal debt obligations and pledged shares may have created a dominant market narrative. Even though these obligations were separate from the bank's balance sheet, they influenced investor perceptions of risk.

Behavioral finance suggests that:

- Investors may overweight visible risks (e.g., pledged shares)
- Negative sentiment may lead to herding behavior
- Prices may deviate from intrinsic value for extended periods

Thus, the sustained decline in NCBFG's share price may reflect behavioral distortions, rather than purely rational valuation.

3. Market Microstructure Theory (O'Hara, 1995)

Market microstructure theory, developed by Maureen O'Hara, examines how trading mechanisms, liquidity, and market design influence price formation.

Key Concepts:

- Liquidity: The ease with which assets can be bought or sold without affecting price
- Market depth: The volume of orders available at different price levels
- Price impact of trades: Small trades can move prices in thin markets

Application to the Case:

The Jamaica Stock Exchange is characterized by relatively low liquidity and limited market depth compared to major global exchanges. In such an environment:

- Small trades can result in disproportionate price movements
- Prices may reflect temporary supply-demand imbalances
- Price discovery may be less efficient and more volatile

The trading halt triggered by minimal trading volume in NCBFG shares illustrates how market structure can influence observed prices, independent of underlying fundamentals.

Integrating the Three Frameworks

The NCBFG case is best understood not through a single theoretical lens, but through the interaction of all three frameworks:

Framework	Explanation of Price Decline
EMH	Rational pricing of future risks (pledged shares, supply shocks)
Behavioral Finance	Investor sentiment and narrative-driven selling
Market Microstructure	Thin liquidity amplifying price movements

Instructor Insight:

The case is deliberately designed so that no single framework fully explains the outcome. Students should be encouraged to evaluate:

- Which framework dominates in the short run
- Whether markets converge to fundamentals in the long run
- How these dynamics differ in emerging vs developed markets

References:

A. Company Disclosures and Market Data (Primary Sources)

NCB Financial Group Limited. (2019–2025). *Annual reports and financial statements*.

Jamaica Stock Exchange.

<https://www.jamstockex.com>

Jamaica Stock Exchange. (2019–2025). *Market data and trading reports*.

<https://www.jamstockex.com>

B. News and Media Sources (Case Evidence)

Jamaica Observer. (2025, August 13). *Lee-Chin responds*.

<https://www.jamaicaobserver.com/2025/08/13/lee-chin-responds/>

Jamaica Observer. (2025, November 28). *Bondholders issue Lee-Chin US\$94m ultimatum*.

<https://www.jamaicaobserver.com/2025/11/28/bondholders-issue-lee-chin-us94-m-ultimatum/>

Jamaica Gleaner. (2023, July 18). *NCB's top duo leave; Lee-Chin makes early return*.

<https://jamaica-gleaner.com/article/lead-stories/20230718/ncbs-top-duo-leave-lee-chin-makes-early-return>

Jamaica Gleaner. (2025, August 13). *NCB Financial defends value amid share price slump*.

IC Insider. (2025). *NCB stock hits low of \$32; trading halted*.

<https://icinsider.com/ncb-stock-hits-low-of-32-trading-halted/>

Our Today. (2024). *Listed companies suffer from David Rose's baneful kiss*.

<https://our.today/listed-companies-suffer-from-david-roses-baneful-kiss/>

Our Today. (2025). *NCB's current situation is troubling – concerned long-term investor*.

NY Carib News. (2025). *Michael Lee-Chin defiant amid debt pressures and market turmoil at NCB Financial*.

<https://nycaribnews.com/michael-lee-chin-defiant-amid-debt-pressures-market-turmoil-at-ncb-financial/>

C. Academic and Theoretical Foundations

Efficient Market Hypothesis

Eugene F. Fama. (1970). *Efficient capital markets: A review of theory and empirical work*.

Journal of Finance, 25(2), 383–417.

Fama, E. F. (1991). *Efficient capital markets: II*. Journal of Finance, 46(5), 1575–1617.

Behavioral Finance

Andrei Shleifer. (2000). *Inefficient Markets: An Introduction to Behavioral Finance*. Oxford University Press.

Barberis, N., Shleifer, A., & Vishny, R. (1998). *A model of investor sentiment*. Journal of Financial Economics, 49(3), 307–343.

Kahneman, D., & Tversky, A. (1979). *Prospect theory: An analysis of decision under risk*. Econometrica, 47(2), 263–291.

Market Microstructure

Maureen O'Hara. (1995). *Market Microstructure Theory*. Blackwell.

Kyle, A. S. (1985). *Continuous auctions and insider trading*. Econometrica, 53(6), 1315–1335.

D. Supporting Finance Texts

Bodie, Z., Kane, A., & Marcus, A. J. (2021). *Investments* (12th ed.). McGraw-Hill.

Mishkin, F. S. (2021). *The Economics of Money, Banking, and Financial Markets* (13th ed.). Pearson.

Saunders, A., & Cornett, M. M. (2020). *Financial Institutions Management* (10th ed.). McGraw-Hill.

When Markets and Fundamentals Diverge: Efficiency vs Sentiment NCB Financial Group - The Chairman's Dilemma

"The market can remain irrational longer than you can remain solvent."

John Maynard Keynes

Introduction

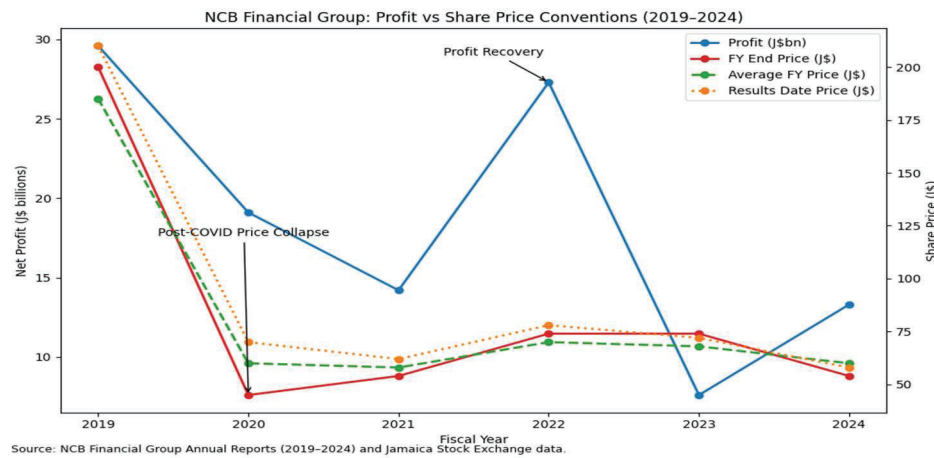
On the evening of August 13, 2025, Michael Lee-Chin sat quietly in his office overlooking Kingston's financial district. Earlier that day, he had publicly rejected calls from some investors to step aside as chairman of NCB Financial Group Limited (NCBFG), Jamaica's largest financial institutionⁱ. Yet the events of the past several weeks weighed heavily on him.

The share price of NCBFG had fallen dramatically. Once trading above J\$200 per share in 2019, the stock had dropped to below J\$30. Hundreds of billions of Jamaican dollars in market value had disappeared. More troubling still was that earlier that month, trading in NCBFG shares had been temporarily halted after only a handful of shares had traded at sharply lower pricesⁱⁱ. The market pricing appeared increasingly disconnected from recent financial results.

NCBFG continued to report profitability, maintained capital above regulatory requirements, and expanded its equity base. By most traditional measures, the institution was fundamentally sound. Yet the market price suggested something very different.

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

Exhibit 1. NCBFG Year-End Profits vs Share Price at Year-End



For Lee-Chin, the stakes were personal, as much of his wealth was tied to his holdings in NCBFG, and as the share price declined, so too did his wealth. Restoring that wealth quickly had become an urgent priority, and now he faced a difficult decision.

One option was to step aside as chairman, a move some market participants believed could influence investor perceptions.

Alternatively, Lee-Chin could remain as chairman and allow the bank's financial performance to speak for itself. A longtime believer in the Efficient Market Hypothesis,¹ he expected that continued strong results would eventually be reflected in the company's share price. If markets were efficient, the share price should eventually converge toward its intrinsic value as new financial information became available.ⁱⁱⁱ Either option offered the possibility of restoring his diminished personal wealth, but he was unsure which path would be realized more quickly and restore the value of his holdings and, by extension, his net worth.

Michael Lee-Chin: From Rags to Riches

Michael Lee-Chin's rise was well known in Caribbean and international financial circles. Born in Portland, Jamaica, in self-described humble beginnings, and the eldest of nine

¹ Market efficiency suggests that prices reflect available information.

children, he migrated to Canada in 1970 on a Jamaican government scholarship to study civil engineering. He later entered financial services, building capital through disciplined investment rather than speculative trading.

In 1987, he acquired AIC Limited, transforming it from a small investment firm into a global asset manager with more than Canadian \$10 billion in assets under management. His investment philosophy, long-term ownership of high-quality businesses, earned him international recognition and, briefly, a place on the Forbes list of billionaires in the early 2000s.

The Institution

NCB Financial Group was one of the most important financial institutions in the Caribbean. Headquartered in Jamaica, the company provided banking, insurance, asset management, and investment services across the region. The bank's size and interconnectedness made it a systemically important institution within Jamaica's financial system. Its performance mattered not only to shareholders but also to regulators, depositors, and the broader economy.

Over the years, NCBFG expanded through a series of strategic investments across the Caribbean, including acquisitions in banking and insurance. These moves transformed the bank from a domestic lender into a regional financial group. Michael Lee-Chin played a central role in that transformation, as through his investment holdings, he acquired a controlling stake in the institution and helped guide its expansion strategy. For much of that time, the market rewarded the company's growth with strong valuations. But by 2025, the relationship between the bank's performance and its share price appeared to have broken down.

Governance and Ownership Structure

NCB Financial Group operated under a governance structure in which Michael Lee-Chin served as both chairman and the company's largest shareholder through affiliated investment entities. This ownership concentration provided strategic continuity but also

meant that a significant portion of the company’s shares was held by a single controlling interest. This structure introduced an additional dimension to investor considerations regarding ownership concentration and potential future share supply.

Strong Fundamentals: Balance Sheet and Capital Considerations

As a financial institution, NCBFG’s valuation was also influenced by the composition and risk profile of its balance sheet. Investors typically evaluate factors such as credit quality, loan portfolio exposure, capital adequacy, and earnings stability when assessing banks.

The bank remained profitable throughout the years leading up to 2025. Even during periods of economic uncertainty, the institution generated earnings and maintained strong capital buffers relative to regulatory requirements. Return on assets and return on equity fluctuated but remained within ranges commonly observed for commercial banks. The institution’s capital adequacy ratios consistently exceeded regulatory minimums, indicating that the bank had sufficient capital to absorb potential losses.^{iv}

Exhibit 3. Key Financial Fundamentals — NCB Financial Group (2019–2024)

Year	Net Profit (J\$bn)	ROE (%)	ROA (%)	Capital Adequacy Ratio (%)	Cost-to-Income (%)	Book Value per Share (J\$)	Share Price (Approx. Year-End J\$)	Price-to-Book
2019	29.6	17.6	1.2	~16.5	~55	~145	~200	1.38
2020	19.1	11.3	0.9	~15.8	~61	~152	~45	0.3
2021	14.2	4.2	0.6	~15.2	~72	~159	~54	0.34
2022	27.3	15.9	1	~16.1	~63	~167	~74	0.44
2023	7.6	~3	~0.5	~15.0	~87	~175	~74	0.42
2024	~13–15	~9.5	~1.0	Above regulatory minimum	~71.6	~185	~54	0.29

Sources: NCB Financial Group Limited Annual Reports (2019–2024), Jamaica Stock Exchange market data and financial disclosures, NCBFG financial results and investor updates

At the same time, the company’s shareholder equity continued to grow. Book value per share increased steadily as profits were retained and added to the bank’s capital base.

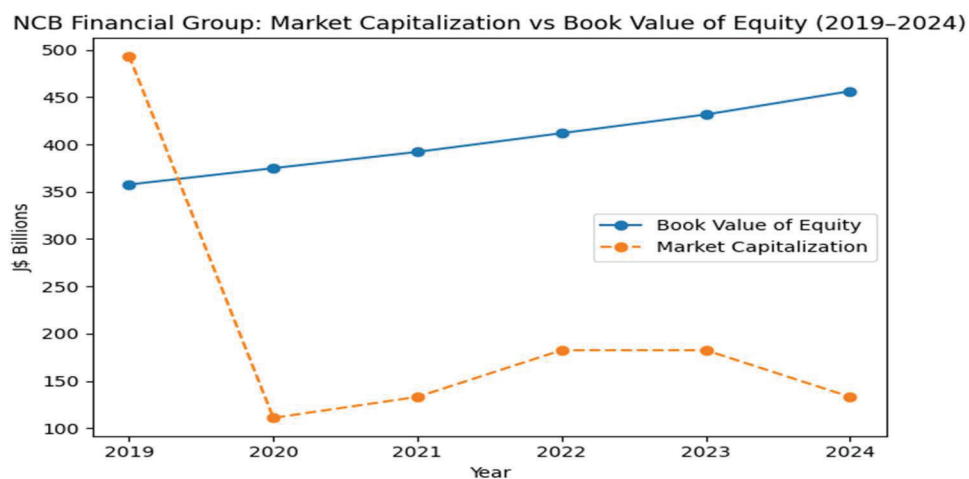
From a fundamental analysis perspective, these indicators provided one view of the bank's financial position, but the market share price told a very different story.

Weak Market Prices

While NCBFG's financial indicators remained relatively stable, its share price declined sharply. The fall became perplexing when compared with measures of the bank's intrinsic value. For instance, at several points, the market price of the bank's shares traded far below its book value per share.

For banks, this ratio is often viewed as an important valuation benchmark, and because they hold large portfolios of financial assets closely monitored by regulators, their book values are often considered meaningful indicators of underlying value.

Exhibit 2. NCBFG Financial Year-End Market Capitalization vs Book Value (2019 – 2024)



Source: NCB Financial Group Annual Reports (2019–2024) and Jamaica Stock Exchange share price data

When the bank's share price traded below book value, investors were effectively suggesting that the market believed the institution was worth less than the accounting value of its net assets. This raised an important question for investors. Why would a profitable and well-capitalized bank trade at such a large discount relative to its equity value?

Bank Valuation and Market Context

Valuing financial institutions differs in important ways from valuing non-financial firms. Investors typically assess banks using a combination of profitability, capital strength, asset quality, and market-based valuation metrics. Key indicators include return on equity (ROE), capital adequacy ratios, loan quality, and the relationship between market price and book value (price-to-book ratio).

Banks that consistently generate returns above their cost of capital, while maintaining strong capital buffers and stable asset quality, are generally expected to trade at or above book value. Conversely, concerns about risk, earnings sustainability, or capital adequacy may result in valuation discounts. At the same time, market pricing of banks may also reflect expectations about future performance, macroeconomic conditions, and perceived risks that are not fully captured in financial statements.

In the case of NCB Financial Group, the company continued to report profitability and maintained capital levels above regulatory requirements. Shareholder equity also increased over time. However, the company's market valuation declined significantly during the same period, resulting in a widening gap between book value and market price.

Stakeholder Perspectives

While management argued that the share price did not reflect the business's underlying value, not all observers agreed. Some analysts and market participants suggested that the decline in NCBFG's share price may have reflected rational concerns rather than market inefficiency. Reports indicated that investor perceptions were being influenced by Lee-Chin's personal debt obligations and the large volume of shares pledged as collateral, raising the possibility of future supply shocks.

Others went further, arguing that the market's pricing was not a temporary distortion but rather a reflection of deeper concerns about strategy, governance, and investor

confidence. In this view, the sustained decline in the share price represented a market reassessment of risk rather than a failure of price discovery.

The Role of Investor Perceptions, Sentiment, and Behavioral Forces

Financial theory often assumes that markets process information rationally. Yet some observers pointed to investor perceptions and narratives as possible explanations². One potential factor influencing investor perceptions was Lee-Chin's personal financial situation. Several of Lee-Chin's personal investment holding companies had experienced difficulties repaying borrowed funds secured by approximately 1.06 billion of the 1.47 billion NCBFG shares that he and his connected entities owned. Although these obligations were not liabilities of the bank itself, the pledged shares posed a potential risk. If lenders were ever to enforce those securities, a large block of NCBFG shares could be released into the market.

For investors, the possibility of such an event created uncertainty because even if the bank remained financially strong, the prospect of a sudden increase in the supply of shares could put downward pressure on the stock price. These concerns were amplified by the structure of Jamaica's equity market.

Market Microstructure and Liquidity

Compared with larger international exchanges, the Jamaica Stock Exchange was relatively small. Trading volumes for many stocks were thin, and liquidity was often limited. In such markets, even small transactions can have a disproportionate impact on price movements.^v During this period, trading patterns highlighted features of the market's structure.

During one trading session, the price of NCBFG shares dropped sharply after only a few shares traded at lower prices. The movement triggered a trading halt under the exchange's

² Behavioral finance studies how psychological traits and social behavior affect financial decisions and market outcomes. It focuses on how investors think, how they react emotionally and how groups behave in markets.

circuit breaker rules^{vi}. The event raised an important question for investors. Was the observed market price truly reflecting the collective judgment of market participants^{vii}, or was it simply the outcome of limited liquidity and market structure?

The Chairman's Dilemma

As the trading day ended and the markets closed for the evening, the chairman reflected on the situation facing him and the bank he had spent decades building. For Lee-Chin, the implications were life-altering as much of his wealth was tied to his ownership stake in NCBFG. Lee-Chin was uncertain which force would dominate the market in the short run, investor sentiment or market efficiency, and he therefore faced a difficult choice.

Which course of action would most quickly restore the value of his personal wealth: stepping aside in anticipation of a shift in investor sentiment, or remaining in place and relying on the eventual convergence of price and fundamentals?

Exhibit 1: NCB Financial Group vs Regional Peers (Indicative Comparison)

Metric	NCBFG	Sagicor Financial	Guardian Holdings
Return on Equity (ROE)	~9.5% (2024), ~12.5% (2025)	~14.2%–15.0%	~12.0%–13.8%
Price-to-Book (P/B)	~0.9–1.0x (below peers)	~1.0–1.5x	~1.0–1.5x
Capital Adequacy	Strong (above regulatory minimums)	Strong (LICAT ~136%)	Strong
Earnings Profile	Volatile but improving	Strong growth	Stable growth
Market Valuation Signal	Discounted	Near or above book	Near book

Sources: NCBFG financial statements; Sagicor Financial 2025 earnings release; Sagicor Group Jamaica audited report; Guardian Holdings financial disclosures and equity analysis reports.

Appendix A1. NCBFG Profit vs Share Price (Three Conventions)

FY	Profit JM\$bn	FY End Price	FY Avg Price	Results Date Price
2019	29.6	200	185	210
2020	19.1	45	60	70
2021	14.2	54	58	62
2022	27.3	74	70	78
2023	7.6	74	68	72
2024	13.3	54	60	58

Sources: NCBFG Annual Reports & Audited Financial Statements <https://www.myncb.com>

StockAnalysis.com – NCBFG ratios and historical prices

<https://stockanalysis.com/quote/jmse/NCBFG/financials/ratios/>

Appendix B2. Timeline of Key Events

Date / Period	Event	Approx. Share Price (J\$)
2019	Pre-COVID peak, strong profits, regular dividends	200 – 249
2020	Dividend suspension. COVID-19 capital preservation	40 – 50
Sep-22	Recovery peak	~90
Jun–Jul 2023	Leadership changes	~67
Early 2025	Strong results	50 → 45
7-Jul-25	Minimal volume triggers halt	~32
Late Jul 2025	Continued decline	~30
Early Aug 2025	Below book value: 38% of BVPS	~28.50
13-Aug-25	Chairman rejects calls to step aside	~29 – 30
Mid-Aug 2025	Decision point	~28.50 – 30

Appendix C. The Efficient Market Hypothesis

The genesis of the efficient market hypothesis lies in the work of Maurice Kendall in 1953, who discovered that stock prices were unpredictable because they reflected the randomness of when new information about a stock became available. This work showed that even future prospects for a stock were reflected in current market prices because, rationally, investors would trade based on the nature of the news to maximize their returns. It is this behavior that helps to make markets efficient. Eugene Fama (1970) formalized this theory by developing the efficient market hypothesis (weak form, semi-strong form and strong form). The efficient market hypothesis in its weakest form assumes that many investors analyze securities independently of each other, engage in frequent trading, respond rapidly to new information that arrives in the market randomly and unpredictably,

and that market prices reflect all publicly available information. This theory assumes that past prices and trading data are already reflected in current prices. The efficient market hypothesis, in its semi-strong form asserts that, in addition to the information based on the weak form hypothesis, prices reflect all earnings forecasts, earnings announcements, dividends, patents held, fundamental data on the firm's product line, quality of management, balance sheet composition, and accounting practices, etc., and these should be priced in the market value of the stock immediately. Therefore, investors who delay trading after new information becomes publicly available cannot use it to earn above-average returns on the stock, as the expectation is that the latest information would be reflected immediately in the stock's price. The efficient market hypothesis in its strong form suggests that prices reflect all public and private information and that even insiders cannot earn abnormal returns. This is more theoretical and rarely held in practice, as the strong form hypothesis assumes perfect markets in which all information is cost-free and available to all investors.

Appendix D. Characteristics of A Good Market

Four basic characteristics that a market must have to be deemed a good market are as follows: Information: A good market provides information about timely and accurate prices, past transaction data, and current buy and sell orders. If investors are unaware of what others are paying, then prices cannot be fair. Liquidity: the ability to buy or sell quickly without causing a significant price change. This is measured by examining the market's characteristics, including, but not limited to, its depth and breadth. A market with depth requires numerous buyers and sellers willing to trade at prices above and below the current market price. Otherwise, it is characterized as shallow. Breadth is present if a large volume of orders exists at prices above and below the current market price. Otherwise, it is called a thin market. Markets can be thin and shallow, thin and deep, broad and shallow,

or broad and deep. US markets are considered deep and broad, while Caribbean markets are considered thin and shallow. Transaction Costs: Transaction costs are the costs associated with buying or selling securities, and investors will normally gravitate towards markets with minimal transaction costs. Lower costs relative to the value of the trade make a market more efficient. Informational efficiency: Informational efficiency exists when prices reflect all available information about a stock and adjust rapidly to new information.

Appendix E. Price Discovery

Price discovery is the process by which a market determines the current price of an asset through the interaction of buyers and sellers, based on their information, expectations, and willingness to trade. Good price discovery requires liquidity (many buyers and sellers actively trading), depth (large order books so individual trades don't move prices too much), information flow (timely, credible disclosure), arbitrage capacity (investors with capital willing and able to exploit mispricing) and low frictions (reasonable transaction costs, no binding constraints). When these conditions hold, prices tend to reflect fundamentals more accurately. Price discovery becomes weakened/distorted when trading volume is thin, few participants dominate order flow, investors are constrained (capital, regulation, risk), behavioral forces dominate (panic, herding), and governance or

narrative overwhelms data. In such cases, prices may reflect who trades rather than what is known.

Notes

ⁱ Jamaica Observer. (2025, August 13). *Lee-Chin responds*. Jamaica Observer.
<https://www.jamaicaobserver.com/2025/08/13/lee-chin-responds/>

ⁱⁱ IC Insider. (2025). *NCB stock hits low of \$32; trading halted*. IC Insider.
<https://icinsider.com/ncb-stock-hits-low-of-32-trading-halted/>

ⁱⁱⁱ The genesis of the efficient market hypothesis lies in the work of Maurice Kendall in 1953, who discovered that stock prices were unpredictable because they reflected the randomness of when new information about a stock became available.

^{iv} NCB Financial Group Limited. (2025). *Audited financial statements 2025*. Jamaica Stock Exchange.
<https://cdn.jamstockex.com/pd/2025/12/NCB-Financial-Group-Limited-Audited-Financial-statements-2025.pdf>

^v Four basic characteristics that a market must have to be deemed a good market are information, liquidity, depth & breadth, and informational efficiency

^{vi} Our Today. (2024). *Listed companies suffer from David Rose's baneful kiss*. Our Today.
<https://our.today/listed-companies-suffer-from-david-roses-baneful-kiss/>

^{vii} Price discovery is the process by which a market determines the current price of an asset through the interaction of buyers and sellers, based on their information, expectations, and willingness to trade.

**NCB Financial Group:
Delegation, Dividends, and the Question of Alignment
A Case of Agency Conflict.
Instructor Note**

Case Synopsis

In June 2023, Michael Lee-Chin, Chairman and controlling shareholder of NCB Financial Group (NCBFG), found himself reflecting on a decision that appeared, at first glance, deceptively simple but was, in substance, deeply rooted in the complexities of corporate governance. Having recently taken a three-month leave of absence, he observed from a distance as the institution, financially strong, well-capitalized, and resilient in the aftermath of the COVID-19 pandemic, continued to perform. However, despite these favorable fundamentals, NCBFG had not paid a dividend since May 2021. This persistent absence of distributions, despite sustained profitability, prompted a more fundamental question: not whether the firm could pay dividends, but why it had chosen not to.

The case unfolds against this backdrop of prolonged dividend suspension, rising attention to executive compensation, and increasing shareholder sensitivity to capital allocation decisions. At its core lies a compensation structure that embodies both alignment and tension. On the one hand, significant equity ownership by senior executives helps align managerial interests with the firm's long-term value. On the other hand, the accumulation of substantial personal wealth, extended managerial tenure, and the presence of deferred, multi-period incentive arrangements introduce the possibility that managerial preferences may diverge from those of shareholders, especially with respect to the timing and form of returns.

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Lee-Chin's dilemma is therefore not framed as a question of operational performance or managerial competence, but as a deeper inquiry into the nature of alignment within a system characterized by delegated authority. The case highlights a classic agency problem: the tension between professional management and shareholder interests within a modern corporation. It presents this tension not as an abstract theoretical construct, but as an evolving governance challenge in an emerging-market financial institution, where principals and agents must navigate competing objectives related to risk, capital preservation, and value creation.

By placing the dilemma at a moment before any overt governance intervention, the case invites students to grapple with the ambiguity inherent in real-world agency relationships and assess whether observed managerial actions align with or diverge from shareholder interests. This case is suitable for graduate courses in Corporate Finance, Corporate Governance, or Management of Financial Institutions.

Learning Objectives

After completing this case, students should be able to:

1. Evaluate the nature of agency conflict in complex organizations
2. Analyze the role of incentive structures in aligning or distorting managerial behavior
3. Assess Capital Allocation decisions through an agency lens
4. Develop judgment under ambiguity in agency relationships

Suggested Teaching Outline (90 Minute Class)

Segment	Time
Case Recap: Establish facts and context	10 min
Discuss Agency Theory and Identify principals, agents, and conflict	15 min
Incentives Deep Dive: Discuss compensation and alignment	20 min
Capital Allocation Debate: Evaluate dividend policy decision	20 min
Decision & Synthesis: Resolve dilemma	15 min
Wrap up: Extract lessons	10 min
Total	90 min

Discussion Questions

1. How does the separation of ownership and control manifest in this case, and what specific features of NCBFG's governance structure intensify or mitigate the agency problem?
2. To what extent does the executive compensation structure at NCBFG align management with shareholder interests, and in what ways might it simultaneously create incentives for divergence?
3. How should the decision to suspend dividends be interpreted through an agency lens? Does it reflect prudent long-term stewardship or a potential divergence from shareholder interests?
4. If you were Michael Lee-Chin, how would you determine whether management's actions reflect shareholder interests?

Pre Discussion Anchoring Exercise: "Managing Someone Else's Money"

Objective: To help students experience the agency problem through a familiar financial setting, highlighting how control, incentives, and risk preferences diverge when one party acts on behalf of another.

Exercise Setup (5 minutes)

Instructor Prompt:

“Imagine a close family member (your parent, relative, or even a friend) asks you to manage a sum of money on their behalf. You are given J\$5 million to manage for them, and they tell you that they want this money to grow. They indicate they may need some income from it occasionally, and there is no formal contract, just trust. You now have full discretion over investment choices, risk level, and whether to generate income (cash flow) or reinvest.

Guided Questions (15-minute discussion)

Step 1: Identify the Agency Relationship

Ask: Who is the principal? Who is the agent?

Students might respond:

- Principal → Owner of the funds
- Agent → You (decision-maker)

Step 2: Surface the Tension

Ask: Would you manage this money exactly the same way you manage your own?

This is the key moment. Most students will admit they would be more conservative, prioritize preserving capital, and might avoid risk, even if higher returns are possible.

Step 3: Identify the Agency Problem

Ask: Why might your decisions differ from what the owner would choose?

Students might respond:

- You bear reputational risk if things go wrong
- You do not fully share in the upside
- You may prefer safety over return

Step 4: Introduce Cash Flow vs Retention

Ask: Would you distribute income regularly, or reinvest everything?

Students typically split:

- Some choose income generation (dividends equivalent)
- Others choose reinvestment (retained earnings)

Ask: “What drives your choice?”

Instructor Pivot

Now connect directly to the case: Highlight to students that they are behaving exactly like management in a corporation. They don’t own the money, but they control it. They are trusted but not perfectly aligned. Their decisions reflect not just the owner’s interests, but your own incentives, risks, and preferences.

Deepening the lesson.

Ask: “If you were compensated based on long-term growth of the portfolio, would your behavior change?”

Students will recognize:

- Yes, as they would place more focus on growth and less emphasis on income

Then ask: “If you were already wealthy, would dividends matter as much to you?”

This directly surfaces wealth effect, reduced dependence on payouts, and a shift in preferences.

Key Lesson

The agency problem emerges not because the agent is untrustworthy, but because the agent experiences the decision differently from the owner. As such, the moment you manage someone else’s money, you stop seeing the world exactly as they do.

Discussion & Analysis

Question 1

How does the separation of ownership and control manifest in this case, and what specific features of NCBFG's governance structure intensify or mitigate the agency problem?

The agency conflict in this case arises from the classic separation of ownership and control, in which shareholders, most prominently Michael Lee-Chin, delegate decision-making authority to professional managers, namely Patrick Hylton and Dennis Cohen. While this delegation is necessary for operational efficiency in large, complex organizations, it creates the potential for divergence between the objectives of principals and agents.

At NCBFG, this conflict is not immediately visible as a breakdown in performance. On the contrary, the firm is financially sound, profitable, and well-capitalized. This makes the agency problem more subtle and therefore more complex. The conflict manifests not in poor outcomes but in differing interpretations of appropriate capital allocation, specifically, the prolonged suspension of dividends despite strong financial metrics.

Several structural features intensify the agency problem. First, the executives' long tenure, spanning nearly two decades, increases the likelihood of managerial entrenchment. Over time, executives may develop a stronger identification with the institution than with its shareholders, potentially shaping their decision-making preferences. Second, the complexity of compensation structures, including deferred incentives and equity-linked arrangements, introduces opacity, making it more difficult for shareholders to assess whether managerial actions are fully aligned with their interests. Third, information asymmetry persists, as management has superior insight into the firm's risk profile and future prospects.

At the same time, certain features mitigate the agency problem. The presence of a dominant shareholder in Lee-Chin provides a counterbalance to managerial discretion, as

concentrated ownership typically enhances monitoring and reduces free-rider problems. Additionally, equity ownership by executives is intended to align interests by tying managerial wealth to firm value. Ultimately, the case illustrates that agency conflict does not require malfeasance or incompetence. It can arise even in high-performing firms when governance structures, incentives, and decision-making authority create conditions under which managerial and shareholder preferences may diverge in subtle but meaningful ways.

Question 2

To what extent does the executive compensation structure at NCBFG align management with shareholder interests, and in what ways might it simultaneously create incentives for divergence?

The executive compensation structure at NCBFG represents a sophisticated attempt to align managerial incentives with shareholder value, yet it simultaneously embodies the inherent tension at the heart of agency theory.

On the alignment side, equity ownership is a central mechanism. By holding significant shares in the company, executives directly participate in the upside of firm performance. This creates a financial incentive to maximize long-term firm value, as increases in share price enhance their personal wealth. Similarly, deferred compensation and long-term incentive plans are designed to encourage decisions that sustain value over time rather than prioritize short-term gains. These mechanisms are consistent with established governance theory, which advocates equity-based pay to reduce agency costs.

However, the same mechanisms can also generate divergence. High accumulated wealth reduces executives' reliance on dividends as a source of income. Unlike smaller shareholders or pension-dependent investors, executives with substantial equity holdings may prioritize capital appreciation over cash distributions. This difference in preference can influence dividend policy decisions.

Long tenure further complicates the picture. Over extended periods, executives may become entrenched, gaining significant influence over organizational strategy and culture. This can reduce the effectiveness of traditional governance controls and increase the likelihood that decisions reflect managerial preferences.

Deferred compensation introduces an additional layer of complexity. Because a significant portion of executive wealth is tied to future outcomes, managers may prefer to retain earnings within the firm to support long-term growth initiatives, even when current shareholders might prefer immediate returns.

Thus, the compensation structure is best understood not as purely aligning or misaligning interests, but as creating a dynamic interplay between alignment and tension. It demonstrates that mechanisms designed to solve the agency problem can, under certain conditions, reshape the agency problem. Students should understand the need for continual reassessment of compensation structures to ensure that they remain credible, performance-linked, and legitimate from a shareholder perspective.

Question 3

How should the decision to suspend dividends be interpreted through an agency lens? Does it reflect prudent long-term stewardship or a potential divergence from shareholder interests?

From an agency perspective, dividend policy is not merely a financial decision but a governance signal that reflects the firm's underlying priorities.

The decision to suspend dividends can be interpreted as prudent stewardship. In the aftermath of the COVID-19 pandemic, regulators encouraged financial institutions globally to preserve capital to maintain stability and absorb potential losses. In this context, retaining earnings could be viewed as a responsible response to uncertainty. Management's emphasis on maintaining a strong capital base aligns with its fiduciary responsibility to ensure the institution's long-term viability.

However, the persistence of the dividend suspension beyond the immediate crisis introduces ambiguity. As financial performance recovered and profitability strengthened, the continued absence of dividends raises questions about whether the original rationale remains fully applicable. From a shareholder perspective, dividends represent a tangible return on investment and a mechanism of capital discipline. Their absence, particularly in a profitable firm, may suggest a shift in priorities.

Through an agency lens, the key issue is not whether the decision is right or wrong, but whose preferences it reflects. Management may prioritize retained earnings to support growth, maintain flexibility, or reduce risk. Shareholders, particularly those dependent on income, may prefer distributions. Divergence arises when these preferences are not fully aligned.

The challenge is that both interpretations, prudence and divergence, are plausible. The decision cannot be evaluated solely on financial metrics; it requires an assessment of incentives, governance structures, and the broader context in which it was made.

Question 4

If you were Michael Lee-Chin, how would you determine whether management's actions reflect shareholder interests?

Determining whether management's actions reflect shareholder interests requires a multidimensional assessment that goes beyond observable outcomes to consider incentives, context, and governance dynamics.

First, I would evaluate the consistency between financial performance and capital allocation decisions. If the firm is profitable and well-capitalized, the continued retention of earnings warrants closer scrutiny. However, this must be balanced against external factors such as regulatory expectations and macroeconomic uncertainty.

Second, I would analyze the management incentive structure. The presence of significant equity ownership suggests alignment, but the scale of accumulated wealth and the

structure of deferred compensation may alter managerial preferences. Understanding how these incentives influence decision-making is critical.

Third, I would consider the role of tenure and organizational dynamics. Long-serving executives often possess deep institutional knowledge, which is valuable, but may also develop preferences that differ from those of shareholders. Assessing whether governance mechanisms remain effective in this context is essential.

Fourth, I would seek additional information to reduce uncertainty. This might include engaging directly with management to understand their rationale, reviewing internal forecasts, and benchmarking the firm's policies against peers.

Wrap up and Key Takeaway for Students

1. Agency problems rarely present as clear failures, as they emerge as subtle shifts in incentives and priorities
2. Alignment mechanisms can create new tensions since equity and long-term compensation both align and distort
3. Capital allocation decisions are governance signals. Dividends vs retention reflects underlying priorities
4. Judgment under ambiguity is central to leadership. There is no "correct" answer, only defensible reasoning

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative is grounded in the governance and capital allocation decisions of NCB Financial Group, the underlying dynamics reflect recurring structural features of agency relationships within emerging-market financial institutions.

High-Level Insights from the Case Series

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding the dilemma and explaining how financial vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points, including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures

- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations
- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best.

In contrast, developed economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

Although this case is situated in Jamaica, its analytical relevance extends to other corporate and financial environments that share similar structural characteristics, including:

- Firms operating in emerging or frontier markets
- Organizations with concentrated ownership structures
- Financial institutions subject to regulatory capital constraints
- Firms where management tenure and accumulated wealth influence decision-making preferences

These conditions are common across many developing economies, where governance challenges are shaped not only by formal structures but also by institutional context, market discipline, and ownership concentration.

At the same time, comparisons with firms in larger, more developed markets highlight important differences. In environments with dispersed ownership, active institutional

investors, and stronger external governance mechanisms, agency conflicts may be more directly disciplined through market forces, shareholder activism, or regulatory intervention. In contrast, in smaller markets, the presence of a dominant shareholder may both mitigate and intensify agency concerns, enhancing monitoring while also concentrating influence.

Importantly, this case should not be interpreted as demonstrating a clear failure of governance. Rather, it illustrates how agency relationships evolve under conditions of complexity and constraint. The coexistence of alignment mechanisms (such as equity ownership and long-term incentives) and potential sources of divergence (such as wealth effects and tenure) reflects a dynamic, rather than static, view of agency theory.

This case therefore offers analytical generalization, demonstrating how governance structures, incentive systems, and institutional context interact to shape capital allocation decisions. The NCBFG dilemma is not unique; it represents a broader class of situations in which decision-makers must assess alignment in the absence of clear signals, balancing competing interpretations of the same underlying facts.

NCB Financial Group: Delegation, Dividends, and the Question of Alignment A Case of Agency Conflict.

“It should be no surprise to discover that the issues associated with the ‘separation of ownership and control’ are intimately associated with the general problem of agency.”

Michael C. Jensen and William H. Meckling, *The Journal of Financial Economics* (1976)ⁱ.

Introduction

In June 2023, Michael Lee-Chin sat quietly at his desk in his home office, reviewing internal reports from NCB Financial Group (NCBFG). The decision to take a three-month leave of absence only weeks earlier had been deliberate. NCB Financial Group remained one of the Caribbean’s most prominent financial institutions, with strong earnings and a sound capital position. The Group had successfully navigated the economic disruptions of the COVID-19 pandemic and had emerged with its core business intact.

Exhibit 1. Key Financial Metrics - NCFG (2019 – 2022)

Year	Net Profit (J\$bn)	ROE (%)	ROA (%)	Capital Adequacy Ratio (%)	Cost-to-Income (%)	Book Value per Share (J\$)
2019	29.6	17.6	1.2	~16.5	~55	~145
2020	19.1	11.3	0.9	~15.8	~61	~152
2021	14.2	4.2	0.6	~15.2	~72	~159
2022	27.3	15.9	1	~16.1	~63	~167

Source: NCB Financial Group Limited Annual Reports (2019–2022)

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However, one issue lingered. The Group had not paid a dividend since May 2021, and Lee-Chin's attention returned to that fact repeatedly. It was not the absence of profits that explained the lack of distributions, nor was there evidence of immediate distress. The institution remained stable, well-capitalized, and operationally sound. The question, therefore, was not whether the company could pay dividends, but why it had chosen not to.

As he leaned back into his chair, Lee-Chin found himself confronting a deeper concern that extended beyond dividend policy and into the core of corporate governance¹. As he wondered aloud, he asked himself whether the dividend policy implementations touted by management still reflected shareholder interests or had it now begun to reflect management's own priorities. The answer to this question would guide how he would frame his role in NCBFG going forward.

A long Partnership

For nearly two decades, Lee-Chin had worked closely with Patrick Hylton, Group CEO, and Dennis Cohen, Deputy CEO and CFO. Under their stewardship, NCB had expanded aggressively across the Caribbean, built a diversified financial-services platform, and weathered multiple economic shocks, including the global financial crisis and the COVID-19 pandemic. A classic agency relationship², it had been built on trust, with Lee-Chin providing vision and capital while management delivered growth and operational execution.

Over time, however, the balance subtly shifted. The management contracts of the two top executives lengthened, their compensation structures grew more complex, and their strategic discretion widened. The most significant change occurred more recently, as while reported profits remained healthy, the company ceased dividend payments to

¹ Corporate governance is the framework through which shareholders (principals) ensure that managers (agents) act in ways that maximize shareholder value while respecting broader stakeholder obligations.

² An agency relationship is one in which principals (shareholders) delegate decision-making authority to agents (managers), creating the potential for conflicts of interest. Since modern corporations are overseen by professional managers rather than owners, managers' incentives may diverge from the firm's value-maximizing objective.

shareholders in May 2021ⁱⁱ, two years prior. As founder, chairman, and the largest shareholder, Lee-Chin saw dividends as more than a payout mechanism. They were a signal of discipline and evidence that profits were being converted into tangible returns, and since he, like many long-term investors, depended on dividend income, the absence of dividends raised a more worrying question: Whose interests was the firm really serving?

Ownership Structure & Board Composition

NCB Financial Group's governance structure reflected a high degree of ownership concentration, with a significant controlling interest held by entities affiliated with Michael Lee-Chin. This concentration provided strategic continuity and long-term orientation but also raised questions regarding the balance between control and oversight. The board comprised a mix of executive, non-executive, and independent directors, consistent with formal governance requirements. However, in environments where a dominant shareholder exerts substantial influence, the effectiveness of board independence may depend less on formal classification and more on the practical ability of directors to challenge strategic and financial decisions. This structure introduced a central tension in the case: whether concentrated ownership enhanced alignment with long-term value creation or created conditions for potential entrenchment and agency conflict.

Executive Compensation & Incentive Alignment

Executive compensation at NCB Financial Group incorporated a combination of fixed remuneration, performance-based incentives, and equity-linked components, reflecting common practices in financial institutions. While detailed weightings of each component were not publicly disclosed, disclosures indicated that incentive structures were linked to financial performance metrics such as profitability and return measures. From a governance perspective, such structures are generally intended to align management incentives with shareholder value creation, consistent with principles advocated by organizations such as the International Corporate Governance Network. However, in a context where ownership is concentrated and a significant portion of managerial wealth may already be tied to equity

holdings, the incremental effectiveness of equity-based incentives becomes less clear. This raises an important question: whether the compensation structure reinforces alignment or whether it may contribute to risk-taking, strategic rigidity, or insufficient sensitivity to minority shareholder concerns.

Incentives and The Chairman’s Interpretation

As Lee-Chin examined the situation more closely, he began to consider the role of incentives. Over the years, the compensation structure for senior executives had evolved to reflect the organization's scale and complexity. The two executives collectively earned approximately J\$3 billion annually in salaries^v, which was an extremely generous package by Jamaican standards.

Exhibit 3. Executive Compensation Structure: NCB Financial Group (Pre-2023)

Component	Description	Observed Features (Pre-2023)
Base Salary	Fixed annual compensation	Combined compensation for the two executives is approximately J\$3 billion annually
Performance-Based Bonuses	Variable compensation linked to financial and operational performance	Bonus structures tied to profitability, growth, and institutional performance over time
Equity Ownership (Direct & Indirect)	Shares held personally or through connected parties	Significant shareholdings: Patrick Hylton: ~137.9 million shares & Dennis Cohen: ~176.3 million shares
Long-Term Incentive Plans	Deferred compensation linked to long-term firm performance	Share-based incentives structured over multiple years with performance-linked allocations
Contractual Protections	Employment terms governing tenure, benefits, and termination	Long-standing contracts reflecting extended tenure (≈20 years), including provisions relevant to separation and continuation of benefits

Source: Compiled from publicly available disclosures and reporting, including Jamaica Gleaner (2023), Jamaica Observer (2023), and related market commentary on NCB Financial Group executive compensation.

Performance-based elements, deferred compensation, and share-linked arrangements were all part of the framework. A critical feature of their compensation structure was equity participation: both executives held large shareholdings in NCBFG, with Hylton holding approximately 137.9 million shares and Cohen approximately 176.3 million shares (including connected parties). In 2021, they surrendered 95.1 million shares

tied to compensation arrangements, valued at J\$13.8 billion at the time. The shares surrendered were not forfeited but were placed in a custodial arrangement for future distribution as part of an ongoing executive compensation framework. The value of the executives' incentives, therefore, depended significantly on long-term share performance rather than immediate cash payouts. These mechanisms were designed to align management with the firm's long-term success, but Lee-Chin now realized that alignment was not static but dynamic³.

It seemed the longer the executives had remained in their roles, the more their perspectives became shaped by the institution itself. Therefore, decisions that once reflected shareholder priorities gradually took on a different orientation, one influenced by stability, continuity, and control. Now, it was clear that Hylton and Cohen had not acted improperly. On the contrary, their decisions could be understood within the context of risk management and institutional responsibility. But understanding a decision did not necessarily resolve the question of whose interests it ultimately served. In the chairman's mind, the dividend policy, once a temporary response to extraordinary circumstances, now seemed to represent something more persistent.

Earnings Quality & Sustainability

Despite the decline in market valuation, NCB Financial Group continued to report profitability and maintain capital adequacy above regulatory thresholds. However, assessing the quality and sustainability of these earnings requires a more nuanced analysis. A portion of earnings growth reflected regional expansion and diversification across financial services, including insurance and asset management. At the same time, such diversification introduced exposure to multiple jurisdictions, regulatory environments, and

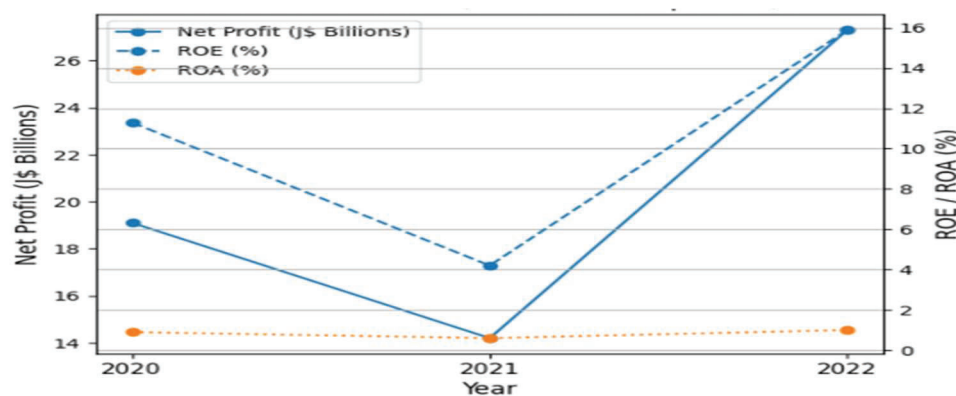
³ In theory, equity-based compensation, deferred remuneration, and long-term incentives align managers' interests with shareholder wealth maximization by linking managerial rewards to firm performance. However, alignment mechanisms can deteriorate over time. As economic conditions, firm performance, and shareholder expectations evolve, contracts designed under one set of assumptions may become misaligned under another.

macroeconomic conditions. Additionally, the composition of earnings, whether driven by core banking activities, non-interest income, or valuation effects, has implications for sustainability. In emerging market contexts, earnings that appear robust in aggregate may still be subject to volatility due to external shocks, currency movements, or changes in investor confidence. This raises a critical interpretive question in the case: whether the market's valuation reflects a mispricing of fundamentally strong earnings or a forward-looking reassessment of their durability.

Management Perspective: Prudent Stewardship After the Pandemic

For Patrick and Dennis, the years following the pandemic demanded caution and capital preservation. From their perspective, the decision to suspend dividends since May 2021 was a prudent response to regulatory advisory and market uncertainty^{vi}. Following the height of the pandemic, the Bank of Jamaica mandated dividend suspensions for financial institutions to conserve capital and enhance their lending and loss-absorption capacity. But even after the mandate was lifted, Hylton and Cohen believed it was wise to maintain a conservative capital posture until the economic recovery was more certain.

Exhibit 2. NCBFG Financial Year-End Performance Indicators (2020 – 2022)



Source: NCB Financial Group Limited Annual Reports (2019–2022)

In management's view, NCBFG's sustained profitability, including a record net profit in 2022^{vii}, was evidence that the strategy worked. The priority, they argued, was to ensure that the Group maintained strong capital reserves, robust credit quality, and regulatory compliance before resuming dividend distributions. Hylton frequently emphasized that shareholder returns are important, but so too is institutional potency. Cohen echoed this in investor calls, noting that "a strong capital base today underwrites future growth and shareholder value tomorrow." For both, caution was about balancing short-term payouts with long-term sustainability, especially for a firm of systemic importance to the Jamaican and regional financial systems

The Dilemma

As the day progressed into the night, Lee-Chin found his thoughts returning to the same unresolved issue. The executives were highly compensated, deeply invested, and aligned with the firm's long-term success, but still, the firm suspended dividends despite strong financial performance. Were the dividend policy implementations that were touted by management a reflection of shareholder interests, or had they begun to reflect management's own priorities? The distinction was not easily observable. It required judgment. And that judgment would determine his next move.

Appendix A

Dimension	NCB Financial Group (Jamaica)
Ownership Structure	Significant ownership concentration through affiliated entities of controlling shareholder
Control Dynamics	Controlling shareholder also serves in leadership role (Chairman)
Board Composition	Mix of executive, non-executive, and independent directors
Governance Tension	Concentration vs independence
Executive Compensation Structure	Combination of fixed pay, performance-based incentives, and equity-linked components
Transparency of Compensation	Limited disclosure of detailed weighting across components
Benchmark (Best Practice)	Broadly consistent with principles advocated by International Corporate Governance Network
Potential Agency Consideration	High existing equity ownership by leadership
Earnings Performance	Strong profitability, capital adequacy, and equity growth
Earnings Composition	Mix of core banking and non-interest income; regional diversification
Earnings Quality Consideration	Exposure to macroeconomic conditions and regional markets
Market Valuation Outcome	Significant divergence between price and fundamentals

Sources: Compiled from NCB Financial Group annual reports, Jamaica Stock Exchange disclosures, and publicly available governance and financial reporting. Governance benchmarking informed by international best practices, including principles from the International Corporate Governance Network (ICGN)

Notes

ⁱ Jensen, M. C., & Meckling, W. H. (1976).

Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360

ⁱⁱ Jamaica Gleaner. (2023, July 18).

NCB's top duo leave as Lee-Chin makes early return.

<https://jamaica-gleaner.com/article/lead-stories/20230718/ncbs-top-duo-leave-lee-chin-makes-early-return>

^v Jamaica Gleaner. (2023, November 14).

Severance package for Hylton and Cohen has material impact on NCBFG's bottom line.

<https://jamaica-gleaner.com/article/news/20231114/severance-package-hylton-and-cohen-have-material-impact-ncbfgs-bottom-line>

^{vi} Bank of Jamaica. (2020, April 24).

Suspension of dividends due to the novel COVID-19 virus (Press release).

^{vii} NCB Financial Group Limited. (2022–2023).

Annual report and financial statements.

Prudence or Profiteering? Why Won't Banks Cut Lending Rates? Managing NCB's Interest Rate Risk Exposure Instructor Note

Synopsis

This case examines the public controversy surrounding Jamaican commercial banks' reluctance to reduce lending rates during the 2009 – 2010 period, an issue that again arose in 2025. It centers on National Commercial Bank Jamaica Limited (NCB Ja. Ltd) prior to its transition to NCB Financial Group and places students in the role of its then Managing Director and CEO, Patrick Hylton, who reminisced about the 2010 scenario based on the newspaper headlines on May 23rd, 2025. At the height of the debate in early 2010, Hylton faced pressure to accelerate the reduction of lending rates in line with declining policy rates and easing inflation, but, despite these signals, commercial banks, including NCB, resisted rapid downward repricing. Hylton had publicly defended this position, citing prudential considerations rooted in the bank's balance-sheet structure.

The 2010 controversy unfolded against a challenging macroeconomic backdrop. In the years leading up to 2009, Jamaica was characterized by exceptionally high sovereign borrowing costs, elevated risk premia on Government of Jamaica (GOJ) securities, and unsustainable debt-service burdens that constrained fiscal flexibility and economic growth. Policymakers viewed lower

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interest rates as essential to breaking this cycle and restoring macroeconomic stability, thereby intensifying pressure on banks to transmit monetary easing more rapidly to the real economy.

At the institutional level, however, NCB's financial disclosures told a more complex story. The bank's 2009 Annual Report revealed a clear interest-rate risk profile, with positive cumulative interest-sensitivity gaps in both the very short term (≤ 3 months) and the medium term (2–5 years) in 2008 and 2009. This asset-sensitive position implied that declines in interest rates would compress net interest income (NII), directly affecting profitability and internal capital generation. As a result, rapid reductions in lending rates posed a tangible financial risk to the bank. The case, therefore, presents a fundamental tension between macroeconomic necessity and micro-level prudence.

This teaching note integrates the case with the repricing-gap framework from interest-rate risk management to illustrate that behavior which may appear externally as strategic manipulation, through the cumulative gap position and the spread effect, can, in fact, be consistent with rational and prudent balance-sheet management. The case invites students to critically evaluate whether slow interest-rate pass-through reflects opportunism or necessary financial discipline in a stressed macroeconomic environment. The case can also be interpreted through the lens of Asset–Liability Management (ALM), specifically the impact of repricing gaps on earnings and equity sensitivity. This case should be taught after students are comfortable with bank balance sheets and with interest-rate risk management. It is appropriate for Graduate courses in Financial Institutions Management, Financial Markets and Institutions, Commercial Banking, and Advanced Corporate Finance.

Learning Objectives

After completing this case, students should be able to:

1. Explain why commercial banks may be slow to reduce lending rates in a declining interest rate environment, using the repricing gap framework and its implications for earnings sensitivity.
2. Interpret and analyze interest rate risk disclosures in bank annual reports.
3. Evaluate executive decision-making under competing stakeholder pressures.
4. Analyze the asymmetry in interest rate pass-through between lending and deposit rates and evaluate whether such behavior reflects prudent interest rate risk management (through CGAP and spread effects) or may be perceived as profiteering in a given macroeconomic context.
5. Assess whether slow interest rate pass-through reflects prudent risk management or market failure.
6. Evaluate and recommend appropriate balance-sheet and risk management strategies to mitigate interest rate risk arising from a bank's cumulative gap (CGAP) position.

Suggested Teaching Outline

A teaching plan for a 90-minute session could be constructed as seen below:

Segment	Time
Cold Open & Vote: "Should Hylton have reduced lending rates more aggressively?"	10 min
Discuss Macro Context. Why were policymakers concerned?	20 min
Bank Mechanics (Analyze CGAP & Implications for NII)	20 min
Discuss Spread Effect & Debate Perception	20 min
Discuss Possible Strategies & Risk Management Implications	20 min
Decision Debate	20 min
Wrap & Takeaways	10 min
Total	120 min

Discussion Questions

1. Why did commercial lending rates in Jamaica adjust more slowly than policy rates during the 2009–2010 period?
2. What does NCB's cumulative interest-sensitivity gap profile for 2008–2009 reveal about the bank's exposure to interest rate movements?
3. To what extent can Patrick Hylton's stance be justified as prudent interest rate risk management, as opposed to a failure to respond appropriately to broader economic conditions?
4. How should the observed asymmetry in interest rate adjustments, where lending rates decline more slowly than deposit rates, be interpreted in the context of NCB's balance sheet?
5. In a high-debt macroeconomic environment, should policymakers intervene to accelerate the pass-through of lower policy rates to lending rates? What are the potential benefits and risks of such an intervention?
6. Should Patrick Hylton have reduced NCB's lending rates more aggressively in response to declining policy rates? What strategies could Hylton have

employed to manage the interest rate risk exposure given NCB Ja. Ltd.'s balance sheet's cumulative gap position?

Pre-Discussion Anchoring Exercise: “Your Salary vs Your Expenses”

Objective: Help students intuitively understand repricing asymmetry, earnings sensitivity (NII), CGAP, and spread effect.

Step 1: Set the Scenario (3 minutes)

Ask students to imagine the following:

“You earn income from freelance work that is renegotiated every 3 months. However, most of your expenses (rent, school fees, insurance) are fixed for 1–2 years.”

Ask students what potential problems there could be with this arrangement. They should indicate that income adjusts frequently (short-term) while expenses adjust slowly (long-term).

Step 2: Introduce the Shock (3 minutes)

Now introduce a change:

“The market rate for your freelance work falls by 20%.” Ask students what happens to their income. What happens to their expenses?

Students may say that income drops quickly while expenses remain unchanged

Step 3: Link to Concept (5 minutes)

Explain that they are asset-sensitive because their income adjusts faster than their expenses.

Step 4: Introduce the “Spread Effect” (5 minutes)

Now modify the scenario:

“You quickly renegotiate some of your expenses downward by 40% (e.g., cheaper utilities, renegotiated contracts, significantly less shopping and dining out), but your income only falls by 20%.”

Ask, “What happens now?” Students may respond that expenses fall faster than income, and their net position improves.

The instructor can then explain that this is exactly what banks do when deposit rates fall faster than lending rates.

Step 5: Introduce Perception (5 minutes)

Now ask:

“Imagine your clients see that you haven’t reduced your rates much, but you’ve reduced your own costs significantly. How might they feel?”

Expected Responses:

- “You’re taking advantage.”
- “You’re being unfair.”

Then ask:

“But are you being unfair, or just protecting your financial stability?”

Step 6: Connect Directly to Case (5 minutes)

Close the loop and explain that this was Patrick Hylton’s dilemma. NCB’s ‘income’ (loans) was falling faster than its ‘expenses’ (funding). If he reduced lending rates too quickly, the bank’s income would collapse.” Also, highlight that because of a bank’s mandate to not only be profitable but also improve year on year, it might employ strategies (spread effect) to cut its costs more, relative to the reduction in income it faces.

Discussion and Analysis

Question 1:

Why did commercial lending rates in Jamaica adjust more slowly than policy rates during the 2009–2010 period?

Lending rates did not fall as quickly as policy rates in Jamaica during 2009–2010 because monetary policy easing collided with both a weak overall fiscal environment and bank balance-sheet constraints. While policy rates were a signal of the central bank's intent, they would not mechanically translate into lending rates unless the structure of the commercial banks' funding, asset repricing, and risk premiums allowed it. Additionally, commercial banks price loans based on market funding costs and sovereign benchmarks, not solely on the overnight policy rate. When GOJ instruments continue to offer high yields, banks face strong incentives to keep loan rates elevated to preserve risk-adjusted returns.

However, the more decisive explanation lies in interest rate risk at the level of the commercial banks. NCB's 2008–2009 cumulative gap profile showed that the bank was asset-sensitive (i.e., had a positive cumulative gap) in the short term (≤ 3 months) and the medium term (2–5 years). This means that rate-sensitive assets exceeded rate-sensitive liabilities over these horizons. In this scenario, when rates rise, NCB's net interest income (NII) improves; however, when rates fall, as is projected here, NII is compressed.

Therefore, as policy rates declined in late 2009 and early 2010, NCB faced a direct threat to earnings. Lowering lending rates immediately would have reduced asset yields faster than funding costs could adjust, squeezing margins and weakening internal capital generation. Because Jamaica's financial system was already under stress from the recession, fiscal risk, and IMF conditionality, commercial bank management had strong incentives to protect earnings stability.

Thus, the slow pass-through was not primarily driven by market power or inertia, but by the interaction between Jamaica's sovereign risk environment and NCB's repricing structure. Policy rates could fall, but balance-sheet economics dictated caution.

Question 2

What does NCB's cumulative interest-sensitivity gap profile for 2008–2009 reveal about the bank's exposure to interest rate movements?

NCB's cumulative gap profile for 2008 and 2009 reveals that the bank was structurally asset-sensitive in two critical horizons: very short term (≤ 3 months) and medium term (2–5 years). In both years, the cumulative interest-sensitivity gaps in these buckets were positive, meaning that rate-sensitive assets exceeded rate-sensitive liabilities.

This has a precise implication for earnings. In an asset-sensitive bank, net interest income moves in the same direction as interest rates. When interest rates rise, asset yields reprice upward faster or more fully than funding costs, increasing margins. When interest rates fall, the opposite occurs: asset yields decline more rapidly than deposit and other funding costs, compressing margins and reducing NII. For NCB, from the Bank's interest rate-risk tables, the data showed that in 2009:

FY2009 (30 Sept 2009), cumulative interest sensitivity gap:

- Within 1 month: +30,127,632 (J\$'000)
- 2–3 months: +22,691,068 (J\$'000)
- 2–5 years: +12,257,946 (J\$'000)

This means that a policy-driven decline in rates directly threatened NCB's earnings stream over both short and medium horizons. This is not a theoretical risk as it would

actually translate into lower profits, weaker capital generation, and potentially reduced lending capacity in the future.

In Jamaica's fragile macro environment, this mattered enormously. Banks were one of the few stable pillars of the financial system. A sharp, policy-induced hit to NII would not only hurt shareholders but could weaken the banking system's ability to absorb shocks. Therefore, NCB's cumulative gap profile suggested that management's reluctance to cut lending rates rapidly was consistent with efforts to protect earnings and capital amid falling rates.

Question 3

To what extent can Patrick Hylton's stance be justified as prudent interest rate risk management, as opposed to a failure to respond appropriately to broader economic conditions?

Patrick Hylton's stance was sound interest-rate-risk management, not a failure of responsibility, though it created a visible conflict with Jamaica's macroeconomic needs. From a banking perspective, Hylton was fulfilling his fiduciary duty. NCB's own disclosures make clear that the Board required active management of interest rate risk through gap analysis, limits, and stress testing. The bank's asset-sensitive position meant that falling rates would weaken NII. Cutting lending rates aggressively would have magnified that effect.

In a normal business cycle, this would already warrant caution. In Jamaica's 2009–2010 environment, marked by IMF negotiations, fiscal consolidation, and exchange-rate vulnerability, even more was warranted. A destabilized banking system would have undermined the very recovery policymakers sought.

At the same time, critics were not irrational. Jamaica's debt dynamics were oppressive. High interest rates on government bonds consumed fiscal space,

crowded out social and capital spending, and kept growth low. Policymakers wanted banks to help break the cycle by passing lower rates through to the real economy.

The conflict, therefore, was between two legitimate mandates:

- The state's duty to restore macroeconomic sustainability.
- The bank's duty to preserve financial stability and shareholder value.

Hylton chose the latter because banks cannot solve sovereign debt problems by sacrificing their own balance sheets. In that sense, his stance was prudent, even if politically unpopular.

Question 4

How should the observed asymmetry in interest rate adjustments, where lending rates decline more slowly than deposit rates, be interpreted in the context of NCB's balance sheet?

The asymmetry in interest rate adjustments, where lending rates decline more slowly than deposit rates, can be explained by NCB's asset-sensitive cumulative gap (CGAP) position. Because rate-sensitive assets exceeded rate-sensitive liabilities, falling interest rates would compress net interest income (NII).

In this context, allowing deposit rates to adjust downward more quickly while maintaining relatively higher lending rates reflects a rational effort to manage earnings pressure. This behavior is consistent with the spread effect, where a widening margin between asset yields and funding costs helps offset the negative impact of declining rates on profitability.

From a risk management perspective, this approach can be justified as prudent. Rapid reductions in lending rates could have weakened NCB's earnings and capital position at a time when Jamaica's macroeconomic environment was already

fragile. Maintaining financial stability was, therefore, a legitimate priority. However, from the public's standpoint, the same behavior appeared inequitable. Borrowers experienced little relief, while depositors saw returns fall quickly, creating the perception that banks were widening spreads for profit. This highlights a key tension in the case: what is internally rational from a balance-sheet perspective may externally appear as opportunistic behavior.

Ultimately, the distinction between prudence and profiteering depends on context. In NCB's case, the asymmetry largely reflects structural balance-sheet realities and risk management considerations, though the perception of unfairness underscores the importance of transparency and effective communication in maintaining public trust.

Question 5

In a high-debt macroeconomic environment, should policymakers intervene to accelerate the pass-through of lower policy rates to lending rates? What are the potential benefits and risks of such an intervention?

In a debt-dominated macroeconomic environment, forcing interest-rate pass-through is tempting but dangerous.

Policymakers want lower rates because debt service is crushing growth and fiscal space. However, compelling banks to reduce lending rates without regard to balance-sheet structure effectively transfers interest-rate risk from the sovereign to the banking system.

In Jamaica's case, banks were heavily exposed to government securities. Their earnings and capital were already intertwined with sovereign creditworthiness. Forcing pass-through when banks are asset-sensitive means deliberately compressing their margins precisely when financial resilience is needed most.

This could have backfired in several ways:

- Weaker banks may reduce lending even further.
- Capital buffers may erode.
- Confidence in the financial system may weaken.
- The interconnection between the sovereign state and the bank may intensify.

A more sustainable approach is to address the root cause: sovereign risk and debt structure. That is why Jamaica pursued IMF support and the Jamaica Debt Exchange (JDX) to reduce interest costs and rollover risk at the government level and in a more structured and deliberate manner. Thus, while policymakers' frustration is understandable, a forced pass-through mandate risks solving a debt problem by creating a banking problem.

Question 6

Should Patrick Hylton have reduced NCB's lending rates more aggressively in response to declining policy rates? What strategies could Hylton have employed to manage the interest rate risk exposure given NCB Ja. Ltd.'s balance sheet's cumulative gap position?

This is the central dilemma of the case. Students can debate and defend both answers.

Arguments FOR Reducing Lending Rates

From a macroeconomic and societal standpoint, Patrick Hylton had strong reasons to reduce lending rates in line with policy easing.

- Jamaica was trapped in a debt-growth-interest-rate spiral at the time. High sovereign yields increased debt service, reduced fiscal space, and depressed

growth, which in turn reinforced investor risk perceptions. Breaking this cycle required lower interest rates across the economy, not just on central bank paper.

- Commercial banks are the main transmission channel of monetary policy. If banks do not pass through lower policy rates, monetary easing becomes ineffective. In that case, the IMF-backed stabilization programs and debt restructuring lose effectiveness.
- Reducing lending rates could also have stimulated private investment, supported business expansion, and reduced default risk among borrowers potentially improving asset quality over time. In an economy starved of growth, lower rates can pay for themselves through higher volumes and better credit performance.
- Furthermore, as the dominant bank, NCB had a quasi-public role. Its pricing decisions shaped market norms. A proactive cut by NCB could have shifted expectations and accelerated broader financial adjustment, helping Jamaica move out of crisis.

Thus, from a developmental and systemic perspective, cutting rates was both economically and socially justified.

Arguments AGAINST Reducing Lending Rates

From NCB's balance-sheet perspective, cutting lending rates aggressively was risky and potentially irresponsible.

- The bank's cumulative gap profile shows it was asset-sensitive in both the short and medium terms. Falling rates would compress NII. Reducing loan rates faster than funding costs could adjust would directly erode earnings.
- Earnings matter because they generate capital. In a fragile macro environment, capital buffers are the first line of defense against shocks.

Weakening the bank to help the sovereign could ultimately harm depositors, credit availability, and financial stability.

- Moreover, policy rates do not fully capture funding costs in an environment where the sovereign is high-risk. Government of Jamaica (GOJ) yields, liquidity risk, and credit risk still require compensation. Cutting lending rates to match policy rates would have ignored the persistent risk premium embedded in Jamaica's financial system.
- Finally, banks cannot be the primary mechanism for solving a sovereign debt problem. That task belongs to fiscal authorities and debt managers through tools like the IMF program and the JDX.

Possible Strategies

Given NCB's asset-sensitive cumulative gap (CGAP), with rate-sensitive assets exceeding rate-sensitive liabilities in the short (≤ 3 months) and medium (2–5 years) horizons, falling interest rates would compress net interest income (NII). To manage this exposure, Hylton could have employed a range of strategies, each with trade-offs among earnings stability, risk, and market perception.

1. Balance-Sheet Rebalancing (Structural Hedging)

Hylton could reduce asset sensitivity by narrowing the positive CGAP:

- Increase rate-sensitive liabilities (RSLs): e.g., shift toward shorter-tenor or more frequently repricing deposits/wholesale funding so funding costs fall more quickly when rates decline.
- Lengthen asset duration / fix asset yields: originate more fixed-rate or longer-reset loans (or hold longer-duration securities) to slow the pass-through of falling rates on assets.
- Reprice mix optimization: rebalance the portfolio toward instruments with less frequent repricing on the asset side relative to liabilities.

Trade-off: May raise funding volatility or reduce competitiveness in deposit markets; fixed-rate assets increase exposure if rates subsequently rise.

2. Active Pricing Strategy (Managed Pass-Through)

Hylton could adopt a gradual, segmented pass-through approach:

- Staggered loan repricing: differentiate by product, risk tier, and tenure to avoid a uniform, immediate drop in asset yields.
- Selective margin management: allow deposit rates to adjust faster than lending rates (spread effect) to cushion NII.
- Risk-based pricing: maintain credit spreads that reflect borrower risk and sovereign benchmarks rather than purely policy rates.

Trade-off: Risks reputational backlash and political pressure if perceived as unfair or unresponsive.

3. Asset Mix and Investment Strategy

- Increase holdings of higher-yielding or fixed-rate securities (e.g., longer-tenor GOJ instruments) to stabilize income.
- Diversify revenue streams toward non-interest income (fees, payments, wealth management) to reduce reliance on NII.

Trade-off: Greater exposure to sovereign risk and mark-to-market volatility; non-interest income may take time to scale.

4. Liability Management and Funding Strategy

- Promote lower-cost, stable deposits (e.g., transaction accounts) to reduce funding costs sustainably.

- Lengthen liability tenor selectively where appropriate to manage repricing mismatches.

Trade-off: Competitive dynamics may limit pricing flexibility; longer-tenor liabilities can lock in higher costs if rates fall.

5. Capital and Buffer Management

- Retain earnings and build capital buffers to absorb temporary NII compression.
- Use stress testing and gap limits to guide acceptable exposure levels and pace of adjustment.

Trade-off: Slower dividend growth; may not address immediate earnings pressure.

6. Communication and Stakeholder Management

- Transparent communication with policymakers and the public explaining balance-sheet constraints and phased pass-through.
- Forward guidance on pricing to align expectations and reduce perception gaps.

Trade-off: Does not eliminate financial risk but can mitigate reputational and political risk.

No single strategy fully eliminates CGAP exposure. An optimal approach would combine measured pass-through, selective balance-sheet rebalancing, and targeted hedging, supported by clear communication. This allows the bank to stabilize NII while gradually aligning lending rates with macroeconomic conditions, balancing prudence with responsiveness in a high-debt, high-risk environment.

Asset–Liability Management (ALM) and Interest Rate Risk

1. Introducing ALM

Although the case focuses on lending rate rigidity and public perceptions of bank behavior, the underlying issue is fundamentally one of Asset–Liability Management (ALM). Asset–Liability Management (ALM) refers to the coordinated management of a financial institution's assets and liabilities to control risks arising from mismatches in timing, repricing, and interest rate sensitivity. In commercial banks, ALM is central to managing interest rate risk, liquidity, and profitability. In this case, the observed divergence between declining policy rates and slower adjustments in lending rates reflects the bank's attempt to manage its balance-sheet exposure to interest-rate movements, rather than purely pricing behavior.

2. Core ALM Concept in the Case: Repricing (Gap) Risk

The central ALM issue in this case is a repricing mismatch. Assets (loans) and liabilities (deposits) reprice at different speeds, and this creates a repricing gap, which determines how interest income responds to rate changes.

Key Concept:

- *Positive cumulative gap (asset-sensitive bank):*
 - Assets reprice faster than liabilities
 - Falling rates reduce net interest income
- *Negative gap (liability-sensitive bank):*
 - Liabilities reprice faster
 - Falling rates may increase margins

In the case the bank exhibits positive cumulative gaps in key maturity buckets, therefore, falling interest rates compress margins, and therefore, slower lending rate adjustment becomes economically rational.

3. Earnings at Risk (EaR) – Short-Term Profitability Lens & Daily Earnings at Risk (DEaR)

One of the primary models used in ALM is Earnings at Risk (EaR). Earnings at Risk measure the potential impact of interest rate changes on net interest income over a short horizon.

Interpretation in the Case:

- When rates fall:
 - Asset yields decline faster than funding costs
 - Net interest income falls
- Banks may therefore:
 - Adjust lending rates more slowly
 - Protect earnings stability

This explains why what appears to be “pricing rigidity” may actually be earnings-stabilization behavior.

Daily Earnings at Risk (DEaR) – Trading Book Perspective

While EaR focuses on the banking book, Daily Earnings at Risk (DEaR) extends the analysis to the trading book, where positions are marked to market and subject to short-term price volatility. Using duration, DEaR measures the potential change in the value of trading positions over a short horizon (typically daily) due to interest-rate movements.

4. Economic Value of Equity (EVE) – Long-Term Value Lens

A second key model is Economic Value of Equity (EVE). EVE measures the sensitivity of the bank's balance sheet value to interest rate changes, based on the present value of future cash flows.

Interpretation:

- Interest rate changes affect:
 - Value of assets
 - Value of liabilities
- The difference impacts:
 - Shareholder value (equity)

In the Case Context:

- Mismatched durations between assets and liabilities:
 - Can reduce the economic value of equity when rates move
- Banks must therefore balance:
 - Short-term earnings (EaR)
 - Long-term value (EVE)

5. Managing Interest Rate Risk

Banks can manage ALM exposure through:

- **Gap management** (aligning asset/liability maturities)
- **Duration matching**
- **Use of derivatives (swaps, forwards)**
- **Diversification of funding sources**
- **Dynamic repricing strategies**

However, in small, bank-dominated economies, these tools are often:

- Limited in availability
- Constrained by market depth

This reinforces the broader project insight that structural constraints shape financial decision-making. Instructors should therefore guide students to recognize that the case is not about whether banks *should* lower rates, but rather about how balance sheets and market structures constrain pricing behavior.

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative focuses on the apparent rigidity of lending rates in Jamaica and the resulting public debate, the underlying issue is fundamentally one of balance sheet management and interest rate risk within a bank-dominated financial system.

High-Level Insights from the Case Series

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding the dilemma and explaining how financial vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points,

including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures
- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations
- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best.

In contrast, developed economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in

which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

Although this case is situated in Jamaica, its analytical relevance extends to other financial systems that share similar structural characteristics, including:

- Bank-dominated economies where financial intermediation is concentrated in a few institutions
- Economies with high sovereign debt and elevated risk premia
- Contexts where monetary policy transmission is imperfect or constrained
- Financial systems with limited capital market depth and alternative funding sources

These conditions are common across many emerging and developing economies in the Caribbean, Africa, and parts of Latin America, where banks play a central role in transmitting monetary policy and managing systemic risk.

At the same time, comparisons with larger, more diversified financial systems highlight important differences. In economies with deep capital markets, diversified funding structures, and active secondary markets, banks may have greater flexibility to manage interest rate risk through hedging instruments, securitization, or market-based funding. In such contexts, the impact of repricing gaps may be less binding, and interest rate pass-through may appear more responsive.

Importantly, this case should not be interpreted as evidence that slow interest rate pass-through is universally justified. Rather, it demonstrates that the speed and symmetry of pass-through depend critically on balance-sheet structure, market conditions, and institutional constraints.

This case therefore offers analytical generalization, illustrating how Asset–Liability Management (ALM), repricing gaps, and risk models such as Earnings at Risk (EaR), Daily Earnings at Risk (DEaR), and Economic Value of Equity (EVE) shape observable pricing behavior. The central insight is that what appears externally as pricing rigidity may, in fact, reflect rational responses to internal balance-sheet constraints.

In this context, the tension between prudence and profiteering is not unique to Jamaica. It represents a broader class of situations in which financial institutions must balance profitability, stability, and policy expectations under conditions of constraint and uncertainty.

References:

Primary Case Data (Bank-Level Sources)

- National Commercial Bank Jamaica Limited (NCB). (2009). *Annual Report 2009*. Kingston, Jamaica: NCB.
(Source of interest rate risk disclosures, repricing gaps, and cumulative gap data used in the case.)

Macroeconomic and Policy Sources

- International Monetary Fund (IMF). (2009). *Jamaica: 2009 Article IV Consultation—Staff Report*. Washington, DC: IMF.
- International Monetary Fund (IMF). (2010). *Jamaica: Request for Stand-By Arrangement—Staff Report*. IMF Country Report No. 10/268.
- International Monetary Fund (IMF). (2010). *Jamaica: Staff Report for the 2010 Article IV Consultation*. Washington, DC.
- Bank of Jamaica (BOJ). (2008–2010). *Quarterly Monetary Policy Reports*. Kingston, Jamaica: BOJ.
- Bank of Jamaica (BOJ). (2008–2009). *Financial Stability Reports*. Kingston, Jamaica: BOJ.
- World Bank. (2013). *Jamaica: Achieving Fiscal Sustainability and Debt Reduction*. Washington, DC: World Bank.

Interest Rate and Government Yield Data

- Bank of Jamaica (BOJ). (2000–2010). *Treasury Bill Auction Results and Historical Yield Data*. Kingston, Jamaica.
- Government of Jamaica, Ministry of Finance and the Public Service. (2010). *Jamaica Debt Exchange (JDX) Background and Technical Note*. Kingston, Jamaica.

Contemporaneous News and Public Commentary (2009–2010)

- Radio Jamaica News. (2010). *NCB MD defends bank's slow response to tumbling interest rates*. Retrieved from <https://radiojamaicanewsonline.com/business/ncb-md-defends-banks-slow-response-to-tumbling-interest-rates>

- Jamaica Gleaner. (2010). *Banks slow to cut loan rates despite policy easing*. Retrieved from <https://web5.jamaica-gleaner.com/gleaner/20100411/business/business3.html>

Contemporary Relevance (2025 Update)

- Jamaica Gleaner. (2025). *Byles pleads for banks to be magnanimous on interest rates*. Retrieved from <https://jamaica-gleaner.com/article/business/20250523/byles-pleads-banks-be-magnanimous-interest-rates>

Academic and Theoretical Foundations

- Saunders, A., & Cornett, M. M. (2019). *Financial Institutions Management: A Risk Management Approach* (10th ed.). New York: McGraw-Hill. (Chapter 8: Interest Rate Risk and the Repricing Gap Model.)
- Mishkin, F. S. (2019). *The Economics of Money, Banking, and Financial Markets* (12th ed.). Pearson. (Monetary transmission and interest rate pass-through.)
- Reinhart, C. M., & Rogoff, K. S. (2010). *Growth in a Time of Debt*. American Economic Review Papers & Proceedings, 100(2), 573–578.

Conceptual and Analytical Frameworks

Jensen, M. C., & Meckling, W. H. (1976). *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*. Journal of Financial Economics, 3(4), 305–360.

Prudence or Profiteering? Why Won't Banks Cut Lending Rates?

Managing NCB Ja. Ltd.'s Interest Rate Risk Exposure

Teaching Case

“The essence of investment management is the management of risks, not the management of returns.”

Benjamin Graham

Introduction

Patrick Hylton paused as he read the May 23rd, 2025, headline in *The Gleaner*, “*Byles pleads with banks to be magnanimous on interest rates.*” The headline felt familiar. Years after retiring from banking, he again found himself thinking about a debate that had defined a critical period of his career, as commercial banks were once more being urged to lower lending rates and accused of moving too slowly in response to declining policy rates. The language was the same, with calls for banks to be “magnanimous,” concerns about weak monetary transmission, and frustration from policymakers and the public alike. He leaned back, reflecting on how little had changed.

More than a decade earlier, he had stood at the center of that very same storm as Managing Director and CEO of National Commercial Bank Jamaica Limited (NCB Ja. Ltd). At the time, although Jamaica was grappling with a severe macroeconomic imbalance, high public debt, elevated sovereign yields, and a heavy debt-service burden that constrained

growth and policy flexibility, inflation was easing, and the Bank of Jamaica had reduced policy rates, but borrowing costs for businesses and households remained stubbornly high.

Back then, the criticism came with names attached. Finance Minister Audley Shaw had expressed growing frustration, arguing that banks were undermining policy efforts to stimulate growthⁱⁱ. Radio talk shows echoed the sentiment.ⁱⁱⁱ Business leaders complained that high interest rates were choking investment. To many Jamaicans, the logic seemed simple: if policy rates were falling, lending rates should follow.

However, within the walls of NCB Ja. Ltd., their reality was more complex. The bank's balance sheet, shaped by years of operating in a high-interest-rate environment, was structured in a way that made falling rates inherently risky. NCB Ja. Ltd.'s 2009 Annual Report^{iv} disclosed a clear interest-rate repricing structure and showed the bank with a positive cumulative interest-sensitivity gap (See Appendix A), in the very short term (≤ 3 months) and the medium term (2–5 years). This indicated that the bank had more assets than liabilities that were sensitive to interest rate changes over those horizons.

As he continued reading, he recalled the complicated question that had swirled around in his head for months during 2010. In a falling interest-rate environment, how should he manage NCB Ja. Ltd.'s interest-rate risk exposure, given its positive cumulative gap position on the balance sheet?

Jamaica's Macroeconomic Backdrop: A Debt-Driven Constraint

To understand the controversy, one had to look beyond the headlines. Jamaica entered the global financial crisis with one of the highest public debt burdens in the world (see Appendix B), a legacy of decades of fiscal imbalances, repeated shocks, and dependence on domestic borrowing (see Exhibit 1). Government of Jamaica (GOJ) bonds routinely carried double-digit yields, reflecting not just inflation expectations, but sovereign risk, rollover risk, and fragile investor confidence.

Exhibit 1. Jamaica's Macroeconomic Imbalance (2009 – 2010) vs Stable Benchmarks

Indicator	Jamaica (2009–2010)	Sustainable / “Good” Range
Public Debt (% of GDP)	~135–140%	<60% (advanced) <70–80% (emerging markets)
Interest Payments (% of GDP)	~11–16%	<3–5%
Interest Payments (% of Revenue)	~40–50%	<15–20%
Primary Balance (% of GDP)	Moving toward ~+7%	+1–3% (stabilizing)
Current Account (% of GDP)	~ -10% to -20%	-3% to -5%
GOJ Yields (T-bills)	~15–22%	<5–8% (stable EM)
GDP Growth (%)	~ -2% to +1%	3–5%+
Debt Amortization (% of GDP)	~15% (pre-JDX)	<5–8%
Foreign Reserves (months of imports)	~2–3 months	≥3–5 months
Bank Exposure to Sovereign Debt	High	Moderate / diversified

IMF surveillance reports leading into 2009 consistently warned that Jamaica's debt dynamics were highly sensitive to interest-rate and exchange-rate shocks, leaving little margin for error. The Bank of Jamaica (BOJ) further noted that global financial turbulence had driven up yields on emerging-market debt, including Jamaican sovereign securities, intensifying borrowing costs just as the economy weakened. Debt service absorbed an extraordinary share of government revenues, crowding out productive spending and limiting policy flexibility.

In response, the Bank of Jamaica reduced policy rates in late 2009 and later implemented the Jamaica Debt Exchange (JDX), a domestic debt restructuring launched in January 2010, explicitly aimed at reducing interest costs and refinancing risk. These actions were widely interpreted as a signal that borrowing costs across the economy should fall. Public expectations quickly followed. Businesses anticipated cheaper credit. Households expected relief on loans. Policymakers pressed banks to accelerate the transmission of monetary easing into lending rates. Nevertheless, commercial banks moved cautiously.

Inside NCB Jamaica Limited: The Balance Sheet Reality

NCB Ja. Ltd., Jamaica's largest commercial bank, sat at the center of this debate. As the dominant lender, it influenced the entire financial system through its pricing decisions. By 2010, NCB had built a reputation for stability and disciplined risk management, attributes that had helped it navigate earlier crises.

At the time, Hylton was keenly aware that public confidence in the banking system mattered. But he was also aware that banks do not price loans solely on policy rates. Lending rates reflected funding costs, sovereign benchmarks, liquidity conditions, and balance-sheet risk exposures. More critically, NCB's own balance-sheet structure posed a direct challenge. NCB's 2009 Annual Report included a detailed disclosure of the bank's interest-rate risk profile for 2008 and 2009, using a repricing-gap framework.

Exhibit 2. NCB Ja. Ltd.'s Cumulative Gap 2008

46. Financial Risk Management (Continued)							
(c) Market risk (continued)							
(ii) Interest rate risk (continued)							
30 September 2008	The Bank						Total
	Within 1 Month	2 to 3 Months	4 to 12 Months	2 to 5 Years	Over 5 Years	Non-Interest Bearing	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Assets							
Cash and balances at Bank of Jamaica	5,890,272	-	-	-	-	9,549,504	15,439,776
Due from other banks	7,672,319	1,574,783	-	-	-	5,450,553	14,697,655
Reverse repurchase agreements	1,010,209	217,437	-	-	-	5,002	1,232,648
Loans and advances net of provision for credit losses	64,179,279	13,011,901	538,706	3,358,812	-	629,370	81,718,068
Investment securities	11,837,423	21,850,476	14,219,888	15,306,900	19,342,275	3,285,676	85,842,638
Investments in subsidiaries	-	-	-	-	-	1,609,609	1,609,609
Investments in associate	-	-	-	-	-	471,534	471,534
Other	-	-	-	-	-	6,835,659	6,835,659
Total assets	90,589,502	36,654,597	14,758,594	18,665,712	19,342,275	27,836,907	207,847,587
Liabilities							
Due to other banks	2,292,927	2,337,176	3,387,783	158,613	405,882	1,877,450	10,459,831
Customer deposits	45,919,356	18,295,103	27,903,587	51,489	-	31,615,137	123,784,672
Repurchase agreements	8,107,452	5,184,802	4,046,053	2,355,564	-	207,804	19,901,675
Obligations under securitisation arrangements	16,241,946	9,790,754	-	-	-	227,040	26,259,740
Other borrowed funds	-	876,033	6,561	769,668	639,931	38,135	2,330,328
Other	-	104,754	-	-	-	4,502,279	4,607,033
Total liabilities	72,561,681	36,588,622	35,343,984	3,335,334	1,045,813	38,467,845	187,343,279
On balance sheet interest sensitivity gap	18,027,821	65,975	(20,585,390)	15,330,378	18,296,462	(10,630,938)	20,504,308
Cumulative interest sensitivity gap	18,027,821	18,093,796	(2,491,594)	12,838,784	31,135,246	20,504,308	

Source: NCB Annual Report 2009

Assets and liabilities were grouped into maturity buckets based on when their interest rates would be repriced or when they would mature and be replaced at current market rates.

Exhibit 3. NCB Ja. Ltd.'s Cumulative Gap 2009

46. Financial Risk Management (Continued)							
(c) Market risk (continued)							
(ii) Interest rate risk (continued)							
	The Bank						
	Within 1	2 to 3	4 to 12	2 to 5	Over	Non-Interest	Total
	Month	Months	Months	Years	5 Years	Bearing	
30 September 2009	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Assets							
Cash and balances at Bank of Jamaica	11,513,639	-	-	-	-	13,135,409	24,649,048
Due from other banks	11,635,148	704,640	-	-	-	1,334,064	13,673,852
Reverse repurchase agreements	351,091	451,420	-	-	-	5,760	808,271
Loans and advances net of provision for credit losses	73,373,382	10,571,560	166,563	2,619,885	20,765	1,019,890	87,772,045
Investment securities	4,672,463	17,936,906	9,322,297	21,465,191	22,431,749	3,538,700	79,367,306
Investments in subsidiaries	-	-	-	-	-	1,609,609	1,609,609
Investments in associate	-	-	-	-	-	471,534	471,534
Other	-	-	-	-	-	6,573,176	6,573,176
Total assets	101,545,723	29,664,526	9,488,860	24,085,076	22,452,514	27,688,142	214,924,841
Liabilities							
Due to other banks	1,294,409	3,125,959	79,207	143,138	-	1,854,178	6,496,891
Customer deposits	49,782,156	20,341,579	29,591,003	52,227	-	29,541,505	129,308,470
Repurchase agreements	2,990,034	2,824,993	2,128,326	7,331,561	-	190,998	15,465,912
Obligations under securitisation arrangements	17,351,492	9,658,311	-	-	-	147,377	27,157,180
Other borrowed funds	-	1,023,400	3,974,679	706,917	573,603	38,227	6,316,826
Other	-	126,848	-	-	-	4,000,230	4,127,078
Total liabilities	71,418,091	37,101,090	35,773,215	8,233,843	573,603	35,772,515	188,872,357
On balance sheet interest sensitivity gap	30,127,632	(7,436,564)	(26,284,355)	15,851,233	21,878,911	(8,084,373)	26,052,484
Cumulative interest sensitivity gap	30,127,632	22,691,068	(3,593,287)	12,257,946	34,136,857	26,052,484	

Source: NCB Annual Report 2009

NCB's disclosures revealed a consistent pattern: its assets repriced faster than its liabilities.

Exhibit 4. NCB's Positive Cumulative Interest-Sensitivity Gaps (J\$'000)

Maturity Bucket	FY2008	FY2009
≤ 1 month	18,027,821	30,127,632
2–3 months	18,093,796	22,691,068
2–5 years	12,838,784	12,257,946

However, the implications of this pattern were invisible to the public.

Public Perception: The Distinction Between Prudence and Profiteering

Complicating matters further was the way interest-rate changes were transmitted across the balance sheet. Loan rates exhibited downward rigidity, while deposit and other funding rates plunged more quickly.

To the public, this raised concerns. Borrowers saw lending rates remain high while deposit rates declined. To critics, the distinction between prudence and profiteering was difficult to see, but what appeared to be manipulation from the outside was, from Hylton's perspective, a rational response to structural balance-sheet risk.

Political Pressure and Competing Mandates

The conflict confronting Hylton was not simply technical, it was institutional. On one side stood the government, under intense pressure to restore growth and rein in debt service. On the other stood the bank, accountable to shareholders, depositors, regulators, and the broader financial system.

Policymakers argued that banks were the primary transmission channel for monetary easing. Without faster pass-through, policy signals would fail, and economic recovery would stall. Hylton implicitly, if not always explicitly, countered that the banks could not be used as instruments of fiscal adjustment without jeopardizing stability.

Revisiting the Dilemma

Patrick Hylton reread the headline before setting the newspaper aside, aware that he had faced a strategic decision that went beyond interest-rate arithmetic. Quickly reducing lending rates had serious implications, as implied by NCB's asset-sensitive cumulative gap position in a falling-rate environment; moving slowly risked being misinterpreted as opportunistic rather than prudential. Over a decade ago, after weighing his options, Hylton had been left to confront the difficult question. In a falling interest-rate environment, how

should he manage NCB Ja. Ltd.'s interest-rate risk exposure, given its positive cumulative gap position on the balance sheet?

Appendix A

The Repricing Gap Model Framework^v

The repricing, or funding-gap, framework is one of the most widely used tools for analyzing interest-rate exposure in commercial banks. Smaller and mid-sized financial institutions (a characteristic of small developing economies) tend to use the framework for its ease and simplicity. At its core, the model focuses on book-value cash flows rather than market values and examines how changes in interest rates affect the difference between what a financial institution earns on its assets and what it pays on its liabilities over multiple planning periods. The appeal of the repricing-gap model lies in its clarity. By organizing the balance sheet based on repricing horizons and comparing rate-sensitive assets and liabilities, the framework provides a transparent picture of how interest-rate movements are likely to affect a bank's earnings over time.

The key idea is straightforward. Banks hold assets and liabilities whose interest rates reset at different times. Some loans, securities, deposits, and borrowings are repriced frequently, while others remain fixed for longer periods. The model groups these instruments into time bands (maturity buckets) based on when their interest rates will change or when they will mature and be replaced at current market rates.

Typical repricing buckets include very short horizons (such as overnight or within 1 month), intermediate horizons (several months), and longer horizons (1 to 5 years or more). Within each bucket, the bank identifies which assets and liabilities are rate-sensitive, that is, which ones will have their interest rates adjusted or replaced with new instruments at prevailing market rates during that time window.

Repricing can occur in two main ways. First, an instrument may mature or be paid off, forcing the bank to reinvest or refinance at new rates. Second, the instrument may be contractually variable, such as a floating-rate loan whose coupon resets periodically based on a benchmark rate. In either case, the institution becomes exposed to changes in interest rates

over that horizon. For each maturity bucket, the bank calculates the repricing gap, defined as the difference between rate-sensitive assets (RSA) and rate-sensitive liabilities (RSL):

$$\text{Gap} = \text{Rate Sensitive Assets (RSAs)} - \text{Rate Sensitive Liabilities (RSLs)}$$

This gap reveals how net interest income will respond to movements in rates. If assets exceed liabilities in a given bucket (a positive gap), and assuming rates are adjusted equally on the assets and liabilities being repriced, the bank benefits when interest rates rise (NII increases) but loses when rates fall (NII decreases). If liabilities exceed assets (a negative gap), the opposite occurs. This is called the CGAP effect. The relationship between the gap and earnings can be expressed simply:

$$\text{The } \Delta \text{ in Net Interest Income (NII)} = (\text{RSA} \times \Delta \text{ in rate}) - (\text{RSLs} \times \Delta \text{ in rate})$$

Where:

Δ NII is the change in net interest income for bucket i , and

Δ rate is the change in interest rates over that period.

If a bank holds a negative gap, it faces refinancing risk, which is the risk that funding costs rise more rapidly than returns on assets. Conversely, if the bank holds a positive gap, it faces reinvestment risk. In that case, falling rates reduce the income earned from assets when they are reinvested, while the cost of liabilities remains relatively fixed.

Unequal Rate Changes to RSAs and RSLs

To manage the earnings volatility created by a bank's cumulative gap position, management can adjust how quickly interest-rate changes are passed through to different sides of the balance sheet. In a falling-rate environment, this often means allowing asset yields to decline more slowly than market rates while permitting funding costs to fall more quickly and more fully. Loan and investment rates, therefore, tend to display downward rigidity, whereas deposit and other liability rates are more flexible. When this pattern holds,

the reduction in interest expense exceeds the loss of interest income, widening the interest margin. Through this mechanism, known as the spread effect, a bank can offset some of the negative earnings impact of being asset-sensitive and, in some cases, even increase net interest income despite operating in a declining interest-rate environment.

Appendix B. Countries with the Highest Public Debt Burdens (circa 2008)

Country	Public Debt (% of GDP)	Key Structural Drivers
Japan	~180–200%	Aging population, prolonged fiscal deficits, low growth
Italy	~105–110%	Persistent deficits, low growth, eurozone constraints
Greece	~100–110%	Fiscal misreporting, structural deficits (pre-crisis escalation)
Belgium	~85–90%	Legacy debt from earlier fiscal imbalances
United States	~65–70% (gross higher)	Crisis stimulus, financial sector support
France	~65–70%	Structural deficits, welfare state spending
Germany	~65–70%	Crisis response + reunification legacy debt
Jamaica	~130–140%	High interest costs, domestic debt dependence
Lebanon	~150–160%	Chronic fiscal deficits, political instability
Iceland	~90% (spiked post-crisis)	Banking sector collapse and sovereign absorption

Notes

ⁱ Jamaica Gleaner. (2025). *Byles pleads for banks to be magnanimous on interest rates*. Retrieved from <https://jamaica-gleaner.com/article/business/20250523/byles-pleads-banks-be-magnanimous-interest-rates>

ⁱⁱ Jamaica Gleaner. (2010). *Banks slow to cut loan rates despite policy easing*. Retrieved from <https://web5.jamaica-gleaner.com/gleaner/20100411/business/business3.html>

ⁱⁱⁱ Radio Jamaica News. (2010). *NCB MD defends bank's slow response to tumbling interest rates*. Retrieved from <https://radiojamaicanewsonline.com/business/ncb-md-defends-banks-slow-response-to-tumbling-interest-rates>

^{iv} National Commercial Bank Jamaica Limited (NCB). (2009). *Annual Report 2009*. Kingston, Jamaica:

^v Saunders, A., & Cornett, M. M. (2019). *Financial Institutions Management: A Risk Management Approach* (10th ed.). New York: McGraw-Hill.
(Chapter 8: Interest Rate Risk and the Repricing Gap Model.)

Jamaica's Oil Hedge: Insurance or Mistake

Instructor Note

Case Synopsis

The case opens in 2026, with former Jamaican Minister of Finance Dr. Peter Phillips reflecting on renewed global concern over oil prices triggered by geopolitical conflict. As headlines warn of rising energy costs, inflationary pressure, and vulnerability among oil-importing economies, Phillips is reminded of a decision he faced a decade earlier when Jamaica confronted similar risks under very different market conditions.

The setting transitions via Dr. Phillips' memory to January 2016, when Jamaica's government had recently implemented an oil hedging program using call options structured through Citibank. It was designed to protect the economy against a potential spike in oil prices, given the widely held expectation that prices could rise further. However, by early 2016, global oil prices had fallen sharply, and the hedge, structured to protect against rising prices, was now widely described as "underwater," triggering public and political criticism and raising questions about whether scarce foreign exchange had been misallocated. Students assume the role of Dr. Peter Phillips, who had to weigh a difficult question at the time: Was the Government's oil hedge a mistake and a misallocation of scarce foreign exchange resources, or a prudent insurance policy?

By placing learners at a moment of unfolding uncertainty (before the hedge's expiry and amid bearish forecasts), the case avoids hindsight bias and foregrounds the tension between ex-ante risk management and ex-post outcome evaluation.

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

The case challenges students to evaluate sovereign risk-management decisions under uncertainty while considering the economic, institutional, and political constraints facing policymakers in small, open economies. The case is suitable for graduate-level courses in corporate finance, risk management, derivatives, public finance, or international financial management.

Learning Objectives: On completing the case, students should:

1. Understand the economic rationale for hedging as a form of risk transfer rather than profit generation.
2. Distinguish between insurance-based hedging and speculative trading in both corporate and sovereign contexts.
3. Evaluate derivative-based risk management decisions using ex ante information rather than ex post outcomes.
4. Recognize and critically assess outcome bias in financial and policy decision-making.
5. Analyze how the evaluation of risk management decisions changes over time as market conditions evolve (“then vs now” perspective).
6. Assess the unique constraints facing sovereign decision-makers, including foreign-exchange limitations, political accountability, and macroeconomic vulnerability.

Teaching Outline:

Below is a suggested teaching plan for a 120-minute session:

Activity	Time
Cold Open & Framing (2026 context)	10 min
Case Context & Risk Exposure	20 min
Hedge Structure & Instrument Choice	20 min
Evaluating the Outcome (2016 lens)	25 min
Temporal Reframing (2026 lens)	20 min
Sovereign Constraints & Policy Debate	15 min
Synthesis & Closing Vote	10 min

Discussion Questions

1. What specific macroeconomic and fiscal risks was the Jamaican government attempting to hedge, and why are these risks particularly acute for a small, oil-import-dependent economy?
(Links to LO1 & LO6)
2. Why were call options an appropriate instrument given Jamaica's institutional and foreign-exchange constraints, and how do they differ from alternative instruments such as futures?
(Links to LO2 & LO6)
3. Does the absence of a payout imply that the hedge failed? How does this relate to the distinction between insurance and speculation?
(Links to LO2, LO3, LO4)
4. How should policymakers evaluate the success of a hedge using ex ante information rather than ex post outcomes? What metrics or benchmarks are appropriate?
(Links to LO3 & LO4)
5. How does the interpretation of Jamaica's oil hedge change when viewed from the perspective of 2026, given renewed increases in oil prices? What does this suggest about evaluating risk management decisions over time?
(Links to LO5)
6. What constraints, economic, institutional, and political, must sovereign decision-makers consider when implementing hedging strategies, and how do these differ from corporate settings?
(Links to LO6)
7. Was the Government's oil hedge a costly mistake or a prudent insurance policy? Under what conditions would your answer change?
(Integrates LO1–LO6)

Pre-Case Discussion Anchoring Exercise: “The Phone Price Lock Decision”

Objective: To help students internalize why paying for an option can be rational, the difference between insurance and speculation, how outcome bias distorts evaluation, and the logic of ex ante decision-making.

Scenario

You plan to buy a new smartphone in 3 months, and the current price is J\$120,000. You are concerned prices may rise (due to exchange rates, supply issues, etc.). A retailer offers you an option to lock in the price. If you pay J\$5,000 today, you secure the right to buy the phone at J\$120,000 in 3 months. If the price rises, you still pay J\$120,000, but if the price falls, you can ignore the option and buy at the lower price.

Step 1: Decision (5 minutes)

Ask the students: “Would you pay J\$5,000 to lock in the price?” Students may answer “Yes”, “No”, or “Depends”. Call on a few students to justify, and risk-averse vs risk-neutral thinking will emerge naturally.

Step 2: Outcome Reveal (5 minutes)

Tell the class: “Three months later, the price falls to J\$100,000.” Then ask: “Was buying the price lock a bad decision?” Expect that some will say yes (waste of money), and some will defend the decision.

Step 3: Introduce Outcome Bias (5–7 minutes)

Probe by asking students: “Did you know the price would fall?” “What information did you have at the time of the decision?”

Highlight the major error made when evaluating risk management decisions ex post by saying: “You are evaluating the decision using information you did not have when you made it.”

Step 4: Flip the Scenario (Critical Move) (5 minutes)

Now say: “Instead, imagine the price rose to J\$150,000.” Ask the students: “Was the J\$5,000 worth it now?” Students will immediately shift.

Step 5: Extract the Concept (10 minutes)

Guide them to articulate that the contract they entered was a call option, and that they bought the right, not the obligation, to buy at J\$120,000. The J\$5,000 was the premium (insurance cost).

Step 6: Map to the Jamaica Case by writing the following on the board (10 minutes)

Phone Example	Jamaica Oil Hedge
Phone price	Oil price
Price lock (J\$120k)	Strike price (~US\$66.5)
J\$5,000 fee	US\$30M premium
Price rise → benefit	Oil spike → hedge pays
Price fall → no use	Oil fall → hedge “expires”

Instructor Bridge:

“Jamaica paid to lock in a maximum price, but the price fell instead.”

Step 7: Deepening the Insight (Advanced Layer) (10 minutes)

The instructor can ask, “Was this insurance or speculation?” and guide the discussion toward the idea that Insurance equals protection against bad outcomes; it is not about trying to profit. The instructor could then ask: “Would your answer change if your ability to

earn depended on being able to afford the phone?” This introduces constraint-based decision-making, which parallels Jamaica’s foreign exchange and fiscal constraints.

Step 8: 2026 Extension (5–10 minutes)

Now connect to your case timeline: “Imagine prices rise dramatically the following year.”

Ask: “Would you wish you had the option?” The final takeaway for students here is that “The value of protection is most visible in the state of the world where you need it, but you must decide before you know that state.” Add that “An option is not about predicting the future, it is about preparing for a future you cannot predict.”

Discussion and Analysis

Question 1

What specific macroeconomic and fiscal risks was the Jamaican government attempting to hedge, and why are these risks particularly acute for a small, oil-import-dependent economy?

The Jamaican government was primarily hedging macroeconomic and fiscal risks arising from oil price volatility, rather than the operational cost of oil itself. As a small, open, oil-import-dependent economy, Jamaica faced a direct transmission mechanism from global oil prices into inflation, fiscal balances, and foreign-exchange (FX) stability.

Oil price increases would raise domestic fuel and electricity costs, which feed quickly into transportation and food prices, creating cost-push inflation. This, in turn, could undermine monetary stability and erode real incomes. From a fiscal perspective, higher oil prices would increase the import bill, putting pressure on the balance of payments and reducing available FX reserves, both of which are critical in a country already operating under IMF-supported fiscal discipline.

These risks are particularly acute because Jamaica lacks the buffers available to larger or energy-producing economies. It cannot offset price increases through domestic production, nor can it easily absorb shocks through deep capital markets. As such, oil price spikes represent non-linear, high-impact risks, capable of destabilizing multiple macroeconomic variables simultaneously.

From a theoretical standpoint, this aligns with sovereign risk management and precautionary hedging: the government sought not to reduce expected costs, but to reduce the variance and tail risk associated with adverse oil price movements.

Question 2

Why were call options an appropriate instrument given Jamaica's institutional and foreign-exchange constraints, and how do they differ from alternative instruments such as futures?

Call options were appropriate because they provide asymmetric protection with a known and limited downside, which is critical for a sovereign with constrained fiscal and foreign exchange resources. By purchasing call options, Jamaica secured protection against oil prices rising above the strike price (~US\$66.5), while retaining the benefit of lower prices if the market declined.

In Jamaica's case, the call options (8 million barrels, with an average strike of US \$66.53 per barrel), were purchased with the expectation that oil prices might rise above approximately US\$67 per barrel during the hedge period. The cost of these options was US\$30 million, which equated to US\$3.75 per barrel, with a breakeven of US\$70.28. If prices had spiked to between US\$80 and US\$90, the options would have generated significant value by capping the effective price paid for oil.

This structure contrasts sharply with futures contracts, which impose a binding obligation and expose the user to unlimited downside risk as prices move against the

position. If Jamaica had used oil futures rather than call options, it would have been exposed to significant downside risk as oil prices fell. There is no contractual cap on losses.

In the context of Jamaica's hedge, consider the following scenario:

- Suppose the government entered a futures contract to lock in oil at US\$66.50 per barrel.
- As oil prices declined to US\$30, and potentially toward US\$10–US\$20 as forecast in early 2016, Jamaica would have incurred losses equal to the full price difference.
- At US\$20 oil, the loss would be roughly US\$46.50 per barrel.
- Across 8 million barrels, this would imply losses of approximately US\$372 million, which is far larger than the US\$30 million option premium actually paid.

These losses would not be realized only at maturity. Under futures contracts, losses are settled daily, requiring the government to post additional margin in foreign currency as prices fall. For Jamaica, this distinction is crucial. A futures-based hedge could have triggered large, immediate foreign exchange outflows as oil prices fell, potentially destabilizing reserves and undermining macroeconomic stability. Options, by contrast, transform uncertain and potentially catastrophic losses into a fixed, upfront premium (approximately US\$30 million). From a theoretical perspective, options are optimal when:

- The decision-maker is risk-averse
- The risk is asymmetric (downside more costly than upside)
- Liquidity constraints prevent absorbing interim losses

Thus, the choice of options reflects both sound financial theory and pragmatic adaptation to sovereign constraints.

Question 3

Does the absence of a payout imply that the hedge failed? How does this relate to the distinction between insurance and speculation?

The absence of a payout does not imply that the hedge failed. This interpretation reflects a common outcome bias, in which decisions are judged solely on realized results rather than on the information and risks present at the time of decision-making. In insurance theory, value is derived from risk transfer, not from realized gains. A fire insurance policy that is never used is not considered a failure; rather, it reflects that the adverse event did not occur. Similarly, Jamaica's oil hedge eliminated exposure to a potentially severe oil price spike. The premium paid represents the cost of transferring that risk, not a speculative loss.

The distinction between insurance and speculation is critical. Speculation seeks to profit from price movements, while insurance seeks to protect against adverse outcomes. Jamaica's use of call options indicates that the objective was protection, not profit. Therefore, evaluating the hedge based on its lack of payout confuses speculative performance metrics with risk management objectives, leading to incorrect conclusions about its effectiveness.

Question 4

How should policymakers evaluate the success of a hedge using ex ante information rather than ex post outcomes? What metrics or benchmarks are appropriate?

Policymakers should evaluate hedging decisions using ex ante criteria, focusing on whether the hedge appropriately reduced exposure to undesirable outcomes given the information available at the time. Key evaluation metrics include:

- Risk reduction: Did the hedge cap exposure to extreme price movements?
- Affordability: Was the premium cost reasonable relative to the risk being insured?

- Scenario analysis: How would the hedge perform under plausible adverse conditions (e.g., oil at US\$90–\$100)?
- Policy alignment: Did the hedge support broader fiscal and macroeconomic objectives?

Ex post evaluation, based solely on realized prices, introduces bias because it ignores the counterfactual scenario in which prices might have risen sharply. The correct benchmark is not the actual outcome, but the distribution of possible outcomes at the time the decision was made. In Jamaica's case, oil had recently traded above US\$100 per barrel, and prices were recovering in mid-2015. The hedge can therefore be seen as a rational response to a credible risk, even though that risk did not materialize.

Question 5

How does the interpretation of Jamaica's oil hedge change when viewed from the perspective of 2026, given renewed increases in oil prices? What does this suggest about evaluating risk management decisions over time?

From the perspective of 2026, the interpretation of Jamaica's hedge becomes more nuanced and arguably more favorable. Renewed increases in oil prices due to geopolitical conflict demonstrate that the risk of price spikes is persistent and recurring, rather than a one-off event. What appeared to be a poor decision in 2016, when prices collapsed, can be reinterpreted as prudent foresight when viewed against subsequent market developments.

This highlights that the nature of evaluation is highly dependent on the context in which it is being evaluated. The same decision can appear misguided in one state of the world and highly effective in another. This temporal dimension underscores a key point in risk management: decisions must be evaluated over time and across states, not at a single point in time. It also reinforces the concept that risk is dynamic, and that policy decisions must be robust to changing conditions rather than optimized for a single forecast. Thus, the

2026 perspective helps correct outcome bias by reintroducing the volatility and uncertainty that justified the hedge in the first place.

Question 6

What constraints, economic, institutional, and political, must sovereign decision-makers consider when implementing hedging strategies, and how do these differ from corporate settings?

Sovereign decision-makers operate under a distinct set of constraints that fundamentally shape their approach to risk management. Economically, governments face foreign-exchange limitations, macroeconomic spillovers, and the need to maintain fiscal sustainability. Unlike corporations, they cannot easily absorb large financial losses or access unlimited liquidity. Institutionally, decisions must align with policy frameworks, including IMF programs, and are subject to oversight by multiple stakeholders. This creates a need for transparency and defensibility. Politically, sovereign decisions are exposed to public scrutiny, where outcomes are often judged simplistically (e.g., “profit” vs “loss”), increasing the risk of outcome bias influencing policy perception.

In contrast, corporations:

- Focus on shareholder value
- Have more flexibility in risk-taking
- Are less exposed to macroeconomic spillovers

These differences explain why Jamaica chose options, despite their cost, over futures, which would have introduced unacceptable liquidity and political risks.

Question 7

Was the Government's oil hedge a costly mistake or a prudent insurance policy? Under what conditions would your answer change?

The hedge can be reasonably characterized as a prudent insurance policy when evaluated ex ante, but as a costly outcome ex post, reflecting the inherent tension in risk management decisions. Ex ante, the decision was justified by:

- High historical volatility in oil prices
- Jamaica's vulnerability to price shocks
- The relatively modest and capped cost of the premium

Ex post, the hedge appears costly because:

- Prices fell significantly below the strike
- No payout was realized
- The premium represented a visible fiscal cost

The evaluation depends on the state of the world. If oil prices had risen to US\$80–\$100, the hedge would likely be viewed as a successful and prudent decision. Conversely, prolonged low prices reinforce the perception of inefficiency. Thus, the most accurate conclusion is that the hedge was rational but contingent: its perceived success depended on outcomes, while its underlying logic depended on risk. This highlights the central lesson of the case: Sound risk management decisions may appear costly precisely because they prevent adverse outcomes that never materialize.

Appendix A

Future-Forward Policy Implications

The Jamaican oil hedge case highlights a broader challenge facing small, open economies: how to design resilient, forward-looking risk management frameworks in the face of persistent global uncertainty. While the 2015–2016 hedge can be debated in terms of its ex post outcome, its underlying rationale underscores the need for structured, repeatable approaches to managing commodity price risk.

Rather than viewing the hedge as a one-off decision, policymakers should consider how to institutionalize a dynamic and adaptive hedging strategy.

1. From Episodic Hedging to a Systematic Risk Management Framework

A key lesson from the case is that hedging should not be implemented as an isolated intervention, but as part of a rules-based policy framework. Governments can establish:

- Trigger-based hedging policies (e.g., initiate hedging when oil prices fall below long-term averages or when volatility rises above defined thresholds)
- Rolling hedge programs, where a portion of expected oil imports is continuously hedged over time
- Predefined risk tolerance bands, specifying acceptable exposure to price fluctuations

Such frameworks reduce reliance on discretionary judgment and help mitigate political and behavioral biases, including outcome bias and hindsight criticism.

2. Partial Hedging and Portfolio Approaches

The binary nature of “hedge vs no hedge” can be replaced with portfolio-based risk management:

- Hedge a portion (e.g., 30–60%) of expected oil imports rather than full exposure
- Combine instruments (e.g., options and swaps) to balance cost and protection
- Use layered hedging strategies, where positions are built incrementally over time

This approach reduces the likelihood that a single decision will be judged as wholly successful or unsuccessful and aligns with modern portfolio risk management theory, where diversification reduces overall exposure.

3. Instrument Selection and Cost Optimization

While call options provide valuable downside protection, their cost can be significant. Future strategies may consider:

- Collar structures (buying calls while selling puts) to reduce premium costs
- Asian options or other structured products that better match consumption patterns
- Exploring longer-dated or staggered maturities to smooth exposure

However, these alternatives must be carefully evaluated against Jamaica's liquidity constraints and risk tolerance, as lower-cost structures may introduce additional obligations or risks.

4. Integration with Broader Energy and Fiscal Policy

Hedging should not be viewed in isolation but as part of a broader national energy and fiscal strategy, including:

- Building strategic fuel reserves to buffer short-term shocks
- Accelerating energy diversification, including renewables, to reduce long-term dependence on imported oil
- Coordinating hedging decisions with monetary and fiscal policy, particularly in managing inflation and foreign-exchange reserves

This integrated approach enhances resilience by combining financial, physical, and structural risk mitigation tools.

5. Regional Collaboration and Risk Pooling

Small economies like Jamaica may benefit from regional approaches to commodity risk management:

- Establishing a Caribbean hedging consortium to pool demand and improve pricing power
- Sharing technical expertise and governance frameworks
- Exploring partnerships with multilateral institutions (e.g., World Bank commodity risk programs)

Such collaboration could reduce transaction costs and improve access to more sophisticated hedging instruments.

6. Leveraging Data, Forecasting, and Technology

Advances in data analytics and artificial intelligence present new opportunities for improving decision-making:

- Incorporating scenario analysis and stress testing using real-time data
- Using machine learning models to assess price distributions rather than point forecasts
- Developing dashboards to monitor risk exposure dynamically

While forecasting will always remain uncertain, improved analytics can support more informed and transparent decision-making processes.

7. Governance, Communication, and Political Economy

A critical lesson from the case is that even well-structured hedging strategies can face public and political backlash when outcomes are unfavorable. To address this, governments should:

- Clearly communicate that hedging is a form of insurance, not a profit-generating activity
- Establish transparent reporting frameworks outlining objectives, costs, and risk exposures
- Ensure robust governance structures, including independent oversight committees

Effective communication is essential to aligning public expectations with the true purpose of risk management.

8. Reframing Success in Public Risk Management

Finally, the case highlights the need to redefine how success is measured in public financial decisions. Rather than focusing solely on realized gains or losses, policymakers should evaluate:

- Whether risks were appropriately identified and mitigated
- Whether decisions were consistent with available information at the time
- Whether the strategy improved resilience under adverse scenarios

In this context, the absence of a payout does not necessarily indicate failure; it may instead reflect that the adverse scenario did not occur.

Conclusion

Looking forward, Jamaica's experience suggests that the central policy question is not whether to hedge, but how to hedge effectively, consistently, and transparently. In a world

characterized by recurring geopolitical shocks and commodity price volatility, the ability to manage risk proactively will remain a critical component of economic resilience.

The challenge for policymakers is to design frameworks that are not only technically sound but also institutionally robust and publicly understood, ensuring that decisions made under uncertainty are judged fairly over time.

Hedging Instruments – Futures vs Options (Clarifying Position and Pricing)

1. Purpose of This Section (Important for Instructors)

This section provides a concise clarification of the hedging instruments referenced in the case, specifically oil price futures and call options. It is intended to support instructors who wish to reinforce the technical aspects of hedging without requiring a full derivatives background.

2. Core Clarification: Both Futures and Options Are Hedging Tools

Both futures contracts and options contracts are standard instruments used to hedge price risk.

- Futures → Lock in a price
- Options → Provide insurance against adverse price movements

The choice between them reflects different risk management philosophies, not a distinction between hedging and speculation.

3. The Government's Exposure (Position Being Hedged)

In this case, the Government of Jamaica faced exposure as a net importer of oil. This means:

- Rising oil prices → higher import bill → pressure on foreign exchange and fiscal balances

Therefore, the government's risk was upward price risk in oil.

4. Hedging with Futures (Price Lock-In Strategy)

Mechanics

- Enter into a futures contract to buy oil at a fixed price
- If market prices rise → gain on futures offsets higher purchase cost
- If prices fall → losses on futures offset cheaper oil

Payoff Structure: Symmetrical as gains and losses move one-for-one

The implication is that it provides certainty but eliminates both downside risk and upside benefit.

5. Hedging with Call Options (Insurance Strategy)

Mechanics

- Purchase a call option giving the right (but not obligation) to buy oil at a specified strike price
- Pay an upfront premium

Payoff Structure: Asymmetrical: If prices rise above strike → option pays off but if prices fall → option expires worthless.

The implication is that it provides downside protection (against rising prices) and upside participation (benefit from falling prices).

Jamaica's Choice

Call options were appropriate because they provide asymmetric protection with a known and limited downside, which is critical for a sovereign with constrained fiscal and foreign exchange resources. By purchasing call options, Jamaica secured protection against oil prices rising above the strike price (~US\$66.5), while retaining the benefit of lower prices if the market declined.

In Jamaica's case, the call options (8 million barrels, with an average strike of US\$66.53 per barrel), were purchased with the expectation that oil prices might rise above approximately US\$67 per barrel during the hedge period. The cost of these options was US\$30 million, which equated to US\$3.75 per barrel, with a breakeven of US\$70.28. If prices had spiked to between US\$80 and US\$90, the options would have generated significant value by capping the effective price paid for oil.

This structure contrasts sharply with futures contracts, which impose a binding obligation and expose the user to unlimited downside risk as prices move against the position. If Jamaica had used oil futures rather than call options, it would have been exposed to significant downside risk as oil prices fell. There is no contractual cap on losses.

In the context of Jamaica's hedge, consider the following scenario:

- Suppose the government entered a futures contract to lock in oil at US\$66.50 per barrel.
- As oil prices declined to US\$30, and potentially toward US\$10–US\$20 as forecast in early 2016, Jamaica would have incurred losses equal to the full price difference.
- At US\$20 oil, the loss would be roughly US\$46.50 per barrel.
- Across 8 million barrels, this would imply losses of approximately US\$372 million, which is far larger than the US\$30 million option premium actually paid.

These losses would not be realized only at maturity. Under futures contracts, losses are settled daily, requiring the government to post additional margin in foreign currency as prices fall. For Jamaica, this distinction is crucial. A futures-based hedge could have triggered large, immediate foreign exchange outflows as oil prices fell, potentially destabilizing reserves and undermining macroeconomic stability. Options, by contrast, transform uncertain and potentially catastrophic losses into a fixed, upfront premium (approximately US\$30 million). From a theoretical perspective, options are optimal when:

- The decision-maker is risk-averse
- The risk is asymmetric (downside more costly than upside)
- Liquidity constraints prevent absorbing interim losses

Thus, the choice of options reflects both sound financial theory and pragmatic adaptation to sovereign constraints

7. Linking Back to the Case Decision

The government's choice of call options reflects a deliberate policy decision:

- Avoid locking in high prices
- Retain flexibility if prices fall
- Transfer extreme price risk to the counterparty

This aligns with a broader principle: Hedging is not about eliminating risk entirely, but about shaping the distribution of outcomes.

8. Teaching Insight (Critical for Instructors)

Instructors should emphasize that the absence of a payout does not imply failure and that the premium paid is the cost of insurance and not a speculative loss. Students should evaluate the hedge ex ante (risk reduction) and not ex post (realized payoff).

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative centers on Jamaica's use of oil price hedging through call options, the underlying dynamics reflect broader challenges of sovereign risk management under uncertainty, particularly in economies exposed to external shocks and constrained by foreign exchange and fiscal limitations.

High-Level Insights from the Case Series

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding the dilemma and explaining how financial vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points, including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures
- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations
- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best.

In contrast, developed economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

Although this case is situated in Jamaica, its analytical relevance extends to other economies that share similar structural characteristics, including:

- Small, open, oil-import-dependent economies
- Countries with limited foreign exchange reserves and fiscal space
- Economies highly exposed to global commodity price volatility
- Sovereign decision-making environments subject to political scrutiny and public accountability

These conditions are common across many Caribbean economies, as well as in parts of Africa, Asia, and Latin America, where commodity price shocks can have systemic macroeconomic effects.

At the same time, comparisons with larger or resource-rich economies highlight important differences. Oil-exporting countries, or economies with diversified energy sources and deeper financial markets, may be less vulnerable to oil price shocks and may have greater flexibility in managing risk through alternative mechanisms. Similarly, countries with stronger fiscal buffers or access to broader financial instruments may be able to absorb volatility without resorting to explicit hedging strategies.

Importantly, this case should not be interpreted as suggesting that all governments should hedge commodity prices. Rather, it demonstrates that the appropriateness of hedging depends on structural factors such as exposure, constraints, and institutional capacity.

This case therefore offers analytical generalization, illustrating how sovereign risk management decisions are shaped by the interaction of uncertainty, constraints, and institutional context. It highlights that the effectiveness of hedging cannot be evaluated solely based on realized outcomes, but must be assessed in terms of risk reduction, resilience, and alignment with policy objectives.

In this context, Jamaica's oil hedge is not an isolated event. It represents a broader class of decisions in which policymakers must act under uncertainty, balancing the cost of insurance against the potentially severe consequences of adverse outcomes. The central insight is that prudent risk management decisions may appear costly precisely because the risks they are designed to mitigate do not materialize.

References:

A. Primary Case Sources (Jamaica-Specific News & Commentary)

Jamaica Gleaner. (2016, January 15).

Aubyn Hill: Government oil hedge underwater.

<https://jamaica-gleaner.com/article/business/20160115/aubyn-hill-government-oil-hedge-underwater>

Jamaica Observer. (2022, March 28).

Hedge oil plan failure.

<https://www.jamaicaobserver.com/2022/03/28/hedge-oil-plan-failure/>

Jamaica Gleaner. (2016, February 5).

Commentary: Oil hedge was a good decision.

<https://jamaica-gleaner.com/article/business/20160205/commentary-oil-hedge-was-good-decision>

B. Government and Official Sources

Ministry of Finance and the Public Service Jamaica. (2022).

Opening Budget Debate Presentation (Revenue Measures).

<https://www.mof.gov.jm>

Jamaica Information Service. (2015).

Jamaica hedges 8 million barrels of crude in deal with Citibank.

<https://jis.gov.jm>

Jamaica Information Service. (2015).

Finance Minister defends purchase of oil hedge.

<https://jis.gov.jm>

C. Recent Context (2026 Oil Prices & War Impact)

Jamaica Gleaner. (2026, March).

Jamaica's fuel stocks surge amid oil war.

Jamaica Observer. (2026, March).

Oil, war, trade and the Caribbean economy.

Jamaica Information Service. (2026, March).

Finance Minister assures Jamaica prepared for oil price fluctuations amid Middle East conflict.

D. Global Oil Price Data Sources

U.S. Energy Information Administration. (2024).

Petroleum and other liquids data.

<https://www.eia.gov>

World Bank. (2024).

Commodity markets outlook.

<https://www.worldbank.org>

International Energy Agency. (2024).

Oil market report.

<https://www.iea.org>

E. Academic and Theoretical Foundations

Arrow, Kenneth J.. (1963).

Uncertainty and the welfare economics of medical care. American Economic Review, 53(5), 941–973.

Knight, Frank H.. (1921).

Risk, uncertainty, and profit. Houghton Mifflin.

Taleb, Nassim Nicholas. (2007).

The Black Swan: The impact of the highly improbable. Random House.

Taleb, Nassim Nicholas. (2012).

Antifragile: Things that gain from disorder. Random House.

Wildavsky, Aaron. (1988).

Searching for safety. Transaction Books.

F. Derivatives and Risk Management (Supporting Theory)

Hull, J. C. (2022).

Options, futures, and other derivatives (11th ed.). Pearson.

Bodie, Z., Kane, A., & Marcus, A. J. (2021).

Investments (12th ed.). McGraw-Hill.

Stulz, R. M. (2003).

Risk management and derivatives. Thomson South-Western.

Jamaica's Oil Hedge: Insurance or Mistake?

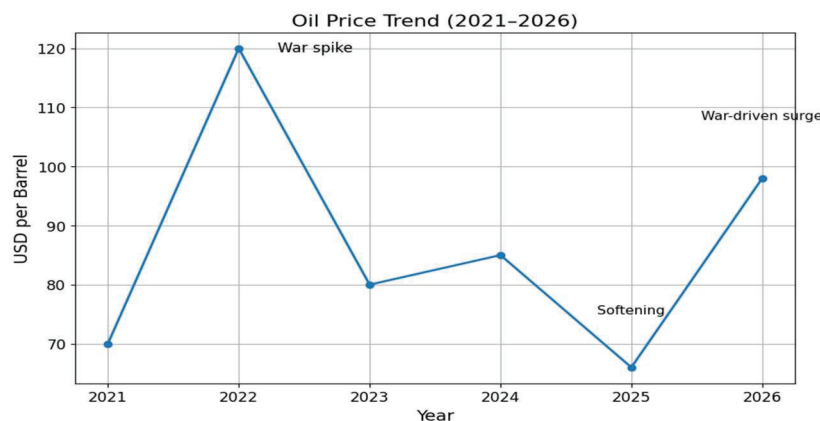
“Success in dealing with risk is often measured by the absence of disaster, but that very absence makes it difficult to demonstrate that prevention was necessary.”

Aaron Wildavsky, *Searching for Safety* (1988)

Introduction

Years after leaving public service, Dr. Peter Phillips sat at his desk in Kingston, scanning the morning headlines. The news cycle was dominated once again by oil. The March 18th, 2026, headlines echoed “Oil prices surge amid war fears... Jamaica braces for impact,”ⁱ while others bellowed “Supply disruptions threaten global markets... inflation risks rising.”ⁱⁱ One article warned that oil prices had already climbed sharply, with analysts cautioning that “sustained prices above US\$100 per barrel will have significant implications for inflation and the wider economy.” Another highlighted that disruptions to key shipping routes meant that “a shock to global oil supply would be felt acutely in small, import-dependent economies like Jamaica.”ⁱⁱⁱ

Exhibit 1: Oil Price Trends [vs Key Global Events](#) (2021–2026)



Source: U.S. Energy Information Administration (EIA), World Bank Commodity Price Data. Values are illustrative but reflect actual market trends.

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Phillips paused. The language was familiar. The concern was familiar. The risk was identical. The same vulnerability, Jamaica's near-total dependence on imported oil, was once again at the center of national economic anxiety. Higher oil prices would quickly pass through to transportation, electricity, and food costs, placing pressure on inflation, the fiscal accounts, and the country's hard-earned macroeconomic stability. He leaned back and reflected.

A decade earlier, he had faced this very problem, not in theory, but in real time. In January 2016, as Jamaica's Minister of Finance, Phillips had been confronting a very different oil market, but an equally complex decision. Only months earlier in 2015, the Government of Jamaica had committed scarce foreign exchange to purchase oil hedge contracts with Citibank, covering roughly eight million barrels of crude oil to protect the economy from a sudden spike in oil prices that could reignite inflation, strain the budget, and destabilize the balance of payments. But by early 2016, with fifteen months to go before the options expired, the market had moved sharply in the opposite direction. Oil prices had fallen below US\$30 per barrel, and new forecasts from major financial institutions suggested prices could decline even further, to as low as US\$10–US\$20 per barrel. The hedge, structured to protect against rising prices, was now widely described as “underwater.”^{iv}

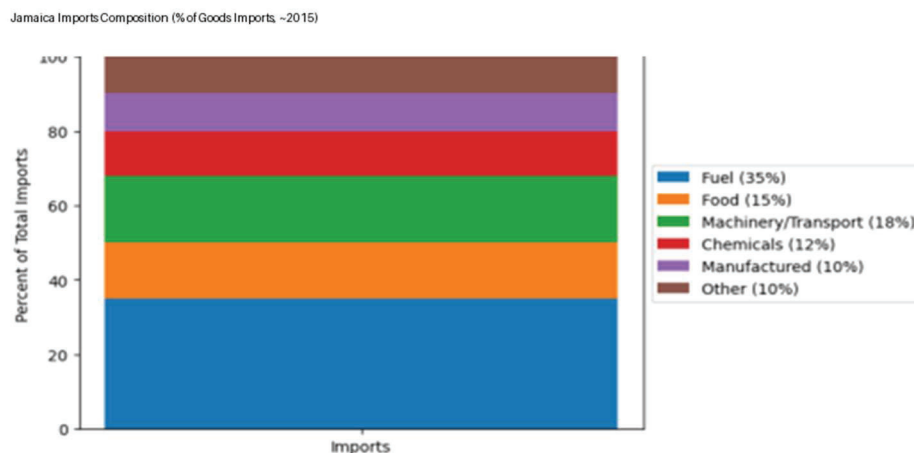
Critics argued that the government had effectively “placed a bet” on rising oil prices and lost. Supporters countered that the hedge was never a speculative wager, but rather a form of insurance against a potentially devastating price rise^v. Phillips had faced a difficult and deeply uncertain question at the time: Was Jamaica's oil hedge a costly mistake?

Background: Jamaica's Economic Context 2015 -2016

To understand the complexity of Phillips' dilemma, one had to examine the economic context at the time. Jamaica's exposure to oil price volatility was long-standing and structural. The country imported nearly all its petroleum needs, and fuel accounted for approximately thirty-five (35%) of the import bill, making global energy prices one of the most important external drivers of domestic economic conditions.^{vi} Increases in oil prices quickly passed into higher transportation and electricity costs, which in turn fed into food

prices and broader inflation. For households, higher oil prices eroded purchasing power, for businesses, they raised operating costs, and for the government, they created fiscal pressure through fuel-related taxes, subsidies, and indirect effects on growth.

Exhibit 2. Jamaica's Import Composition (% of Goods Import – 2015)



Source: World Bank / WITS trade data (exports vs imports totals)

These vulnerabilities were magnified by Jamaica's limited economic buffers. The country's export base was narrow (see Appendix A), foreign exchange inflows were volatile, and access to international capital markets remained fragile. Years of macroeconomic instability had left Jamaica with high public debt and limited room for policy error.

By the mid-2010s, the government was operating under IMF-supported reform programs, which emphasized fiscal discipline, debt reduction, and credibility with international investors.

Exhibit 3. Jamaica Macroeconomic Imbalance (2015 – 2016) vs Stable Benchmarks

Indicator	Jamaica (2015–2016)	Sustainable / “Good” Range
Public Debt (% of GDP)	~130–135%	<60% (advanced) <70–80% (emerging markets)
Interest Payments (% of GDP)	~7–9%	<3–5%
Interest Payments (% of Revenue)	~25–30%	<15–20%
Primary Balance (% of GDP)	~+7%	+1–3% (stabilizing)
Current Account (% of GDP)	~ -2% to -4%	-3% to -5%
GOJ Yields (T-bills)	~5–8%	<5–8% (stable EM)
GDP Growth (%)	~1–2%	3–5%+
Debt Amortization (% of GDP)	~8–10%	<5–8%
Foreign Reserves (months of imports)	~4–5 months	≥3–5 months
Bank Exposure to Sovereign Debt	High	Moderate / diversified

Sources: IMF Country Reports – Jamaica (Extended Fund Facility, 2013–2016), World Bank – World Development Indicators, Bank of Jamaica – Economic Data & Balance of Payments, Ministry of Finance, Jamaica – Debt & Fiscal Reports

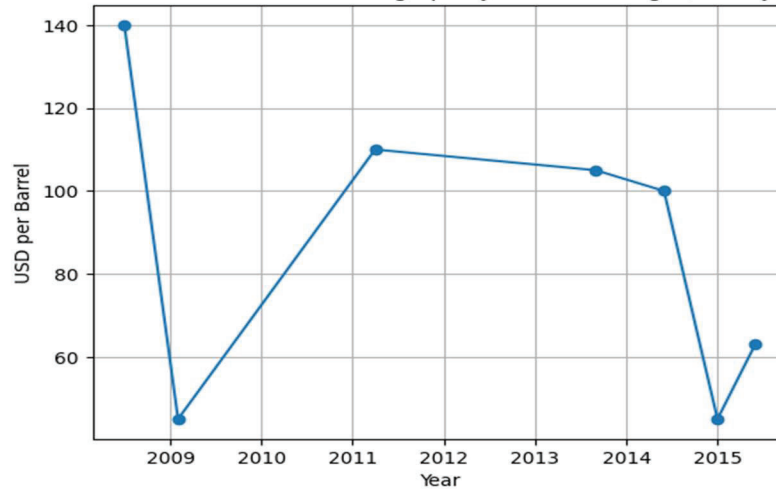
Within this framework, unexpected external shocks, especially sharp increases in oil prices, posed a direct threat to macroeconomic stability. A sudden spike in oil prices could widen the current account deficit, accelerate inflation, and force difficult fiscal adjustments. Managing energy price risk, therefore, became a matter of national fiscal strategy rather than simply routine procurement by state-owned enterprises.

Oil Price Volatility: A Recent Memory

Phillips recalled vividly that the fear of rising oil prices was not hypothetical, as global crude oil prices frequently exceeded US\$100 per barrel between 2008 and 2014, and Jamaica had already lived through the consequences of those price levels.

Exhibit 4. Global Oil Prices as at Year-End 2009 - 2014 & June 2015 (Illustrative)

Illustrative Global Oil Prices Leading up to Jamaica's Hedge (2008–June 2015)



Source: U.S. Energy Information Administration (EIA), World Bank Commodity Price Data, and Jamaica Gleaner (2016). Values are illustrative but reflect actual market trends during 2015–2016.

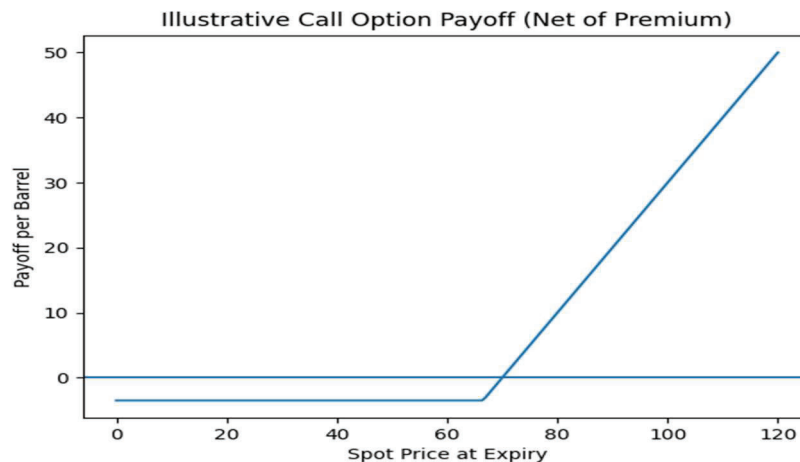
But in 2015, oil prices had collapsed, falling to around US\$45 per barrel in January amid global oversupply and slowing demand. By mid-year, prices had begun to rebound, but by June 2015, crude was trading around US\$63 per barrel, raising concerns that the decline might prove temporary. By the time Dr. Phillips and his team decided to hedge, the consensus was that oil prices might rise sharply again, returning to levels that Jamaica could ill afford.

The Hedge

Against this backdrop, the government moved to hedge its oil price exposure. In mid-2015, amid volatile, rising global oil prices, the government entered into a series of oil hedging contracts with Citibank, paying approximately US\$30 million in premiums^{vii}. The

mechanism used, called an option¹, granted Jamaica the right to buy oil at the strike price at or before maturity, thereby insulating it against price spikes above that level.

Exhibit 5. Illustrative Call Option Payoff (Net of Premium)



With projections initially suggesting that prices might continue to rise toward the US\$70–US\$90 range, the government bought call options covering six million barrels of oil at a strike price of US\$66.74 per barrel. A month later, it purchased a second call option covering two million barrels, bringing total coverage to about eight million barrels with an average strike near US\$66.53. The strike price in the options contract was the price the government would pay per barrel for oil if it chose to use the contract, regardless of the market price at the time it decided to make the purchase.

Had oil prices risen sharply, the hedge would have generated positive payoffs, thereby reducing the cost of crude imports. However, if prices remained below the strike price, Jamaica would lose the premium paid, leaving the option contract “underwater” and

¹An option is a derivative contract that gives its holder the right, but not the obligation, to buy (call), or sell (put) an underlying asset at a predetermined price (the strike price) on or before a specified expiration date. In exchange for this right, the buyer pays an upfront premium to the seller of the option.

expiring worthless. Unlike futures² contracts, which impose binding obligations and expose users to margin calls and potentially unlimited losses, options capped the government's downside exposure at a known, upfront cost.

But by early 2016, with fifteen months to go before the options expired, the opposite had happened. Oil prices plummeted over the second half of 2015, falling well below US\$30 per barrel, which were levels unseen since the global financial crisis and prior to the 2004–2014 oil price run that saw Brent crude reach over US\$100 per barrel at certain points. Forecasts from Goldman Sachs, Morgan Stanley, and Standard Chartered indicated that prices could fall further, potentially remaining in the US\$10–US\$20 per barrel range for an extended period.

Governance and Public Reaction

The 2015 oil hedging program had not been undertaken in isolation. The government established oversight and technical committees comprising senior officials from the Ministry of Finance, the Bank of Jamaica, and Petrojam Limited, Jamaica's sole oil refinery. The committees reviewed the structure and rationale of the transactions and endorsed the strategy, believing oil prices would climb above US\$67 before the hedge's expiry.

As Jamaica's hedge moved deeper underwater, criticism mounted quickly. Critics argued that the government had squandered scarce foreign exchange. Opposition figures argued that the government had misallocated scarce foreign exchange, resources that could have been used to reduce debt, support social programs, or bolster reserves.^{viii} Media commentary focused on the apparent absence of any payoff, portraying the hedge as a failed bet on oil prices because the options had little to no intrinsic value, and the US\$ 30 million spent to purchase them had been forfeited. Supporters countered that the hedge

² Futures contracts impose a binding obligation on both parties to buy or sell the underlying commodity at a fixed price on a specified future date. There is no upfront premium, but participants are required to post margin and settle gains and losses daily through a process known as *mark-to-market*.

still served its intended purpose to protect Jamaica against adverse price spikes; however, that scenario had not occurred.

Conclusion

Dr. Peter Phillips set the article down and looked out across the city. The headlines were louder now than they had been in 2016, but the underlying problem had not changed. Once again, global conflict was driving uncertainty in oil markets. Once again, small, import-dependent economies like Jamaica were exposed. Once again, oil prices had demonstrated their capacity for sharp and unpredictable reversals. This time, however, he was no longer in office. He was now an observer, not a decision-maker; still, the cost back then had been real, and the criticism had been public and persistent. Now, in 2026, as oil markets once again reflected the fragility of global supply and the unpredictability of geopolitical events, the question remained as relevant as it was in 2016: Was Jamaica's oil hedge a costly mistake or a prudent form of fiscal insurance?

Appendix A. Jamaica Trade Balance (Goods Only) – Detailed Breakdown, 2015

Export Category	Description	Approx. Value (US\$ millions)	Share (%)
Alumina & Bauxite	Primary mineral exports	650	~52%
Refined Petroleum Products	Petrojam-related exports	300	~24%
Agricultural Products	Coffee, sugar, yams, fruits	120	~10%
Chemicals & Industrial Products	Industrial compounds, inputs	100	~8%
Manufactured Goods	Light manufacturing exports	80	~6%
Total Exports		~1,250	100%
Import Category	Description	Approx. Value (US\$ millions)	Share (%)
Mineral Fuels (Oil & Energy)	Crude oil, refined fuels	1,650	~35%
Food & Agricultural Imports	Wheat, rice, processed food	700	~15%
Machinery & Transport Equipment	Vehicles, industrial equipment	850	~18%
Chemicals	Pharmaceuticals, industrial inputs	560	~12%
Manufactured Consumer Goods	Electronics, appliances	470	~10%
Other Imports	Miscellaneous goods	470	~10%
Total Imports		~4,700	100%
Item	Value (US\$ billions)		
Exports of Goods	~1.25		
Imports of Goods	~4.70		
Trade Balance (Goods)	Negative (3.45)		

Appendix B. Derivative Instruments - Options and Futures

1. What Is a Derivative?

A derivative is a financial contract whose value is derived from the price of an underlying asset, such as oil, currencies, interest rates, or equities. Derivatives are commonly used to manage risk (hedging), though they can also be used for speculation. Two of the most widely used derivative instruments are options and futures.

2. What Is an Option?

An option is a contract that gives its holder the right, but not the obligation, to buy or sell an underlying asset at a predetermined price (the strike price) on or before a specified date (the expiration date).

There are two main types of options:

- Call option: Gives the right to buy the asset
- Put option: Gives the right to sell the asset

To obtain this right, the buyer pays an upfront premium to the seller.

How a Call Option Works

A call option increases in value when the market price of the underlying asset rises above the strike price.

- If the market price is above the strike price, the holder can exercise the option or settle it for a gain.
- If the market price is below the strike price, the option will not be exercised and expires worthless.

The key feature is that the maximum loss is limited to the premium paid, while potential gains can increase as the underlying price rises.

Key Characteristics of Options

- Right, not obligation
- Upfront premium required

- Limited downside risk (premium only)
- Asymmetric payoff (downside capped, upside open)

Options are often used as a form of insurance, protecting against unfavorable price movements while allowing participation in favorable ones.

3. What Is a Futures Contract?

A futures contract is an agreement between two parties to buy or sell an asset at a predetermined price on a specified future date. Unlike options, futures create a binding obligation for both parties.

How Futures Work

Once a futures contract is entered into:

- Gains and losses are realized daily through a process called mark-to-market
- Both parties must maintain a margin account and may be required to post additional funds if the market moves against their position

For example:

- If a party agrees to buy oil at US\$66 per barrel and the market price falls to US\$30, that party incurs a loss equal to the difference
- These losses are settled continuously, not only at the contract's maturity

Key Characteristics of Futures

- Obligation to transact
- No upfront premium (but margin required)
- Potentially unlimited gains and losses
- Daily settlement (mark-to-market)

Futures eliminate price uncertainty but introduce liquidity risk, as losses must be funded as they occur.

Appendix C. Key Differences Between Options and Futures

Feature	Options	Futures
Obligation	Right, not obligation	Binding obligation
Upfront cost	Premium required	No premium
Downside risk	Limited to premium	Potentially unlimited
Upside potential	Unlimited (for buyer)	Unlimited (symmetrical)
Cash flow timing	Premium paid upfront	Daily margin calls
Risk profile	Asymmetric	Symmetric
Typical use	Insurance / risk protection	Price locking / hedging

5. Interpreting Their Use in Risk Management

Options and futures both allow decision-makers to manage exposure to uncertain prices, but they do so in fundamentally different ways:

- Options transfer risk in exchange for a known cost, making them suitable when downside risk must be strictly limited.
- Futures fix the price of an asset but expose the user to ongoing gains and losses, which must be funded over time.

The choice between these instruments depends on factors such as:

- Risk tolerance
- Liquidity constraints
- Institutional and operational capacity

Notes

ⁱ Jamaica Gleaner. (2026, March).

Jamaica's fuel stocks surge amid oil war.

ⁱⁱ Jamaica Observer. (2026, March).

Oil, war, trade and the Caribbean economy.

ⁱⁱⁱ Jamaica Information Service. (2026, March).

Finance Minister assures Jamaica prepared for oil price fluctuations amid Middle East conflict.

^{iv} Jamaica Gleaner. (2016, January 15).

Aubyn Hill: Government oil hedge underwater.

<https://jamaica-gleaner.com/article/business/20160115/aubyn-hill-government-oil-hedge-underwater>

^v Jamaica Gleaner. (2016, February 5).

Commentary: Oil hedge was a good decision.

<https://jamaica-gleaner.com/article/business/20160205/commentary-oil-hedge-was-good-decision>

^{vi} World Bank / WITS trade data (exports vs imports totals)

^{vii} Jamaica Information Service. (2015).

Jamaica hedges 8 million barrels of crude in deal with Citibank.

<https://jis.gov.jm>

^{viii} Jamaica Observer. (2022, March 28).

Hedge oil plan failure.

<https://www.jamaicaobserver.com/2022/03/28/hedge-oil-plan-failure/>

Mayberry Jamaican Equities & The Written Call Option: A Consistent Investment Philosophy or A Covered Call Compromise? Instructor Note

Synopsis

This case examines a strategic decision by Mayberry Jamaican Equities Limited (MJE), a publicly listed investment company in Jamaica, to write a covered call option on its largest portfolio holding, Supreme Ventures Limited (SVL), in October 2018. Positioned in a relatively small, illiquid emerging market, the case explores how portfolio concentration, liquidity constraints, and active management discretion shape investment decisions.

MJE's stated philosophy emphasized disciplined investing to achieve capital appreciation and dividend income through selected equity positions. However, analysis from JN Fund Managers at the time of MJE's IPO raised questions about the absence of a clearly defined benchmark and the incentive effects embedded in its performance-based compensation structure, suggesting that the firm's mandate may allow for a broader range of strategies than investors might initially assume.

The covered call transaction serves as the focal decision through which students are invited to examine the alignment between stated investment philosophy and actual portfolio actions. By writing the option, MJE retained ownership of SVL shares while exchanging potential upside beyond the strike price for immediate premium income and a conditional exit price. The case does not ask whether the decision was correct ex post; rather, it challenges students to evaluate whether the transaction is consistent with a

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disciplined, long-only equity strategy, or reflects a shift toward more opportunistic or derivative-based approaches that may resemble alternative investment styles. In doing so, the case requires students to interpret the firm's mandate, assess the role of risk management and incentives, and consider how investment philosophy is operationalized in practice under real-world market constraints. This case is best taught as a portfolio decision under structural constraint, not as a textbook options strategy. The case is suitable for graduate-level courses in corporate finance, risk management, derivatives, public finance, or international financial management.

Learning Objectives

By the end of this case discussion, students and executives should be able to:

1. Evaluate the alignment between stated investment philosophy and actual portfolio decisions, particularly in the context of active equity management within emerging markets.
2. Analyze the economic trade-offs embedded in a covered call strategy, including the exchange of potential upside for immediate income and its implications for total return.
3. Assess how portfolio concentration, liquidity constraints, and market structure influence investment decision-making in small and less liquid capital markets.
4. Examine the role of incentive structures and investment management agreements in shaping risk-taking behavior, including the potential for agency conflicts.
5. Distinguish between hedging, income-enhancement, and speculative uses of derivatives, and apply these distinctions to real-world portfolio contexts.
6. Interpret how the absence of explicit benchmarks or risk constraints affects performance evaluation and accountability in actively managed investment vehicles.
7. Develop a structured framework for assessing whether a financial strategy represents disciplined portfolio management or a deviation toward opportunistic risk-taking, particularly under conditions of uncertainty.

Suggested Teaching Outline

Segment & Key Questions / Focus	Time
Cold Open: Decision Framing. Was the covered call consistent with MJE's investment philosophy?	10 min
Discussion: What are the key terms of the transaction? What exactly did MJE do?	10 min
Discuss Investment Philosophy & Mandate. What constraints are implied (or not) by the IPO and stated philosophy?	15 min
Analyze Covered Call Mechanics (Payoff Logic)	15 min
Discuss Strategy Classification (hedging, income enhancement, or speculation)	20 min
Discuss Market Context & Constraints. Would this strategy look different in a developed market?	15 min
Discuss Agency Issues: How do performance fees and the absence of a benchmark influence managerial behavior?	15 min
Opportunity Cost & Ex Ante Evaluation: How should opportunity cost be evaluated? Should this decision be assessed ex ante or ex post?	10 min
Synthesis & Wrap up: To what extent does the covered call reflect disciplined investing versus a deviation from MJE's philosophy? What would you recommend going forward?	10 min
Total	120 min

Discussion Questions (Aligned to Learning Objectives)

- How does the covered call structure reshape the risk-return profile of the Supreme Ventures position, and what economic trade-offs did Mayberry accept in entering the transaction?
(Maps to Objectives 2 and 6)
- How do the characteristics of the Jamaican capital market, specifically liquidity constraints and portfolio concentration, help explain or justify Mayberry's decision?
(Maps to Objective 3)
- In what ways might the incentive structure and investment management agreement have influenced the decision to write the option, and what potential agency issues does this raise?
(Maps to Objectives 4 and 7)

4. How should the success or appropriateness of the covered call strategy be evaluated, specifically in terms of opportunity cost and ex ante versus ex post reasoning?
(Maps to Objectives 5 and 8)
5. To what extent was Mayberry Jamaican Equities' decision to write the covered call consistent with its stated investment philosophy of disciplined, long-term equity investing?
(Maps to Objectives 1, 7, and 8)

Pre- Discussion Anchoring Exercise: “The Concert Ticket Dilemma”

Objective: To help students internalize the core concepts of the case, namely trade-offs, opportunity cost, capped upside, and ex ante decision-making, begin with a simple, relatable scenario.

Scenario: Imagine you purchased a concert ticket for J\$5,000 to see a very popular artist. A week before the event, a friend offers you J\$8,000 upfront for the *option* to buy your ticket at J\$6,000 on the day of the concert. You keep the ticket unless they choose to exercise their right. If they do, you must sell it to them for J\$6,000.

You accept the J\$8,000 upfront.

Step 1: Individual Reflection (2–3 minutes)

The instructor can ask students: “Would you accept this deal?” “Why or why not?” “What are you gaining immediately?” “What are you giving up?”

Step 2: Small Group Discussion (5 minutes)

Have students discuss:

- What happens if the ticket value rises to J\$15,000 on the day of the concert?
- What happens if the value falls to J\$4,000?
- How does the upfront payment influence your decision?

Step 3: Plenary Debrief (Instructor-led)

Guide students toward the key parallels:

- The upfront J\$8,000 = option premium (income today)

- The obligation to sell at J\$6,000 = strike price (capped upside)
- Keeping the ticket unless exercised = covered call structure

Then ask: “Did you eliminate risk, or just change its shape?” “Did you make a 'good' or 'bad' decision, or does it depend on what happens later?” “How would you judge the decision *before* knowing the outcome?”

Key Learning Link to the Case

Conclude with: “What you just did is exactly what Mayberry did. They owned the asset, collected income upfront, and agreed to limit their upside. The key question, just like in your decision, is not what happened after, but whether the trade-off made sense at the time given your expectations and constraints.”

Discussion and Analysis

Question 1.

How does the covered call structure reshape the risk-return profile of the Supreme Ventures position, and what economic trade-offs did Mayberry accept in entering the transaction?

A covered call alters the risk-return profile by combining a long equity position with a short call option. The investor receives an upfront premium, which provides immediate income and a modest buffer against downside risk. However, this comes at the cost of surrendering upside beyond the strike price. As a result, the return distribution becomes asymmetric: gains are capped, while downside exposure remains largely intact.

In Mayberry’s case, the economic trade-off involved exchanging uncertain future capital gains for certain current income. The premium enhances short-term returns and reduces earnings volatility, which may be desirable given dividend commitments and market conditions. However, the strategy limits participation in significant upward price movements, which is central to equity investing. The appropriateness of this trade-off depends on expectations about future price movements and the firm’s broader objectives. If upside potential was perceived as limited, the strategy may be justified; if not, the foregone gains represent a meaningful economic cost.

Question 2

How do the characteristics of the Jamaican capital market, specifically liquidity constraints and portfolio concentration, help explain or justify Mayberry's decision?

The Jamaican capital market is relatively small and illiquid, meaning that large transactions can significantly impact prices. For Mayberry, which held a concentrated position in Supreme Ventures, reducing exposure through outright sale could have depressed the stock price and reduced realized value. This makes traditional portfolio adjustments more difficult compared to developed markets.

The covered call offers an alternative mechanism for managing this constraint. It allows Mayberry to retain ownership, generate income, and establish a conditional exit without immediately entering the market. Additionally, the premium provides liquidity that may support dividend payments or cash flow needs. Portfolio concentration further reinforces this rationale, as large exposures increase both risk and the difficulty of rebalancing.

Thus, the strategy can be understood as a response to structural market constraints rather than a purely directional view of the stock. It reflects how real-world conditions, such as liquidity and market depth, shape the set of feasible investment decisions.

Question 3

In what ways might the incentive structure and investment management agreement have influenced the decision to write the option, and what potential agency issues does this raise?

The presence of performance-based fees introduces incentives that may influence managerial decision-making. Writing a covered call generates immediate premium income, which can enhance short-term reported performance. This may be attractive in a structure where compensation is linked to realized earnings rather than long-term value creation.

The absence of a clearly defined benchmark further amplifies this issue. Without a benchmark, it becomes difficult to evaluate whether returns are appropriate relative to risk, increasing managerial discretion. JN Fund Managers' critique suggests that this flexibility could allow for strategies that are riskier or more opportunistic than investors might expect.

These features raise potential agency concerns, in which managers may prioritize strategies that optimize short-term metrics or income generation over long-term

shareholder value. However, this does not imply misalignment by default. Rather, it highlights the importance of clearly defined mandates, performance benchmarks, and transparency in aligning managerial actions with investor expectations.

Question 4

How should the success or appropriateness of the covered call strategy be evaluated, specifically in terms of opportunity cost and ex ante versus ex post reasoning?

The evaluation of the strategy should be grounded in ex ante reasoning rather than ex post outcomes. Ex post analysis focuses on realized price movements and may highlight foregone gains as opportunity costs. However, this approach risks outcome bias, judging decisions based on information unavailable at the time.

Ex ante evaluation considers the expected distribution of outcomes at the time the decision was made. The relevant comparison is between the covered call and alternative strategies, such as holding the stock unhedged or selling it outright. Each option involves trade-offs in terms of risk, return, and liquidity. Opportunity cost should therefore be understood as the expected value of these foregone alternatives, not the maximum possible gain observed in hindsight.

In Mayberry's case, the strategy may have been appropriate if the premium adequately compensated for the perceived likelihood of limited upside, given market conditions and constraints. The key lesson is that decision quality should be assessed based on information, expectations, and objectives at the time of execution, rather than solely on realized outcomes.

Question 5

To what extent was Mayberry Jamaican Equities' decision to write the covered call consistent with its stated investment philosophy of disciplined, long-term equity investing?

The consistency of the covered call strategy with Mayberry's stated investment philosophy depends on how "disciplined investing" is interpreted. On one hand, the strategy can be viewed as consistent with disciplined portfolio management. Writing a covered call reflects an intentional reshaping of the payoff profile, generating income, managing concentration risk, and establishing a conditional exit price. In this sense, it aligns with active management

and risk-aware decision-making, especially in an emerging market context where liquidity constraints are significant.

On the other hand, the strategy introduces tension with a philosophy centered on capital appreciation. By capping upside, Mayberry limited its participation in potential gains from a core holding. This raises questions about whether the firm's actions were fully aligned with investor expectations of a long-only equity strategy. The absence of explicit constraints on derivative use or a defined benchmark further complicates this assessment. Ultimately, the decision can be seen as either a disciplined adaptation or a deviation, depending on how broadly the firm's mandate is interpreted.

Appendix: Covered Call Strategies Across Market Contexts: Income Optimization vs Structural Constraint

1. Purpose of This Appendix

This appendix clarifies the apparent deviation from standard covered call practices observed in the case. It is intended to support instructors—particularly those more familiar with developed markets—in understanding how option strategies may differ in emerging market contexts such as Jamaica.

2. Covered Call Strategies in Developed Markets (Benchmark Practice)

In developed markets, covered call strategies are typically used as income-generating overlays rather than capital allocation tools.

A standard approach involves:

- Writing out-of-the-money (OTM) call options
- Maintaining partial coverage (e.g., 30–70% of the portfolio)
- Rolling positions periodically (e.g., monthly or quarterly)

Institutions such as JPMorgan Chase employ such strategies in structured income products, where the objective is to:

- Generate incremental yield
- Preserve upside participation
- Manage portfolio volatility

In this framework:

- Premium income supplements returns
- Upside is partially retained
- Liquidity enables continuous adjustment

Importantly, these strategies assume:

- Deep and liquid options markets
- Narrow bid–ask spreads
- Continuous price discovery
- Availability of multiple maturities and strike prices

3. The Observed Strategy in the Case (Jamaican Context)

In contrast, the strategy observed in this case involves:

- Writing in-the-money (ITM) call options
- Potentially higher levels of coverage
- Limited evidence of dynamic rebalancing or rolling

At first glance, this appears inconsistent with standard income strategies, particularly given the trade-off between premium income and upside potential.

4. Interpreting the Strategy: Structural Constraints in Small Markets

The key to understanding this divergence lies in **market structure**, not misapplication of theory.

In smaller, less liquid markets such as Jamaica:

A. Limited Market Depth and Liquidity

- Options markets are thin or illiquid
- Limited availability of:
 - Strike prices
 - Maturities
 - Counterparties

Result:

- Firms may not be able to construct finely tuned OTM strategies
- Available trades may be **coarse and infrequent**

B. Premium Maximization Under Constraint

- Writing ITM options generates:
 - **Higher upfront premium** (the assumption of a minimum of J\$5 million was already noted in the case. The actual premium received was not made public, but the author suspects it would be significant and in excess of J\$5 million for the strategy to make sense)
 - More immediate cash flow

In a constrained environment, this may be rational if:

- Liquidity is valuable
- Market opportunities are infrequent
- Capital must be deployed efficiently

C. Reduced Ability to Dynamically Hedge or Roll

- Limited secondary market liquidity restricts:
 - Position adjustments
 - Rolling strategies

Result:

- Strategies may be **static rather than dynamic**
- Greater reliance on **initial structuring decisions**

D. Portfolio Concentration and Market Structure

- Holdings may be concentrated in a few large, illiquid securities
- Selling calls may serve multiple purposes:
 - Income generation
 - Partial exit strategy
 - Liquidity management

5. Valuation Considerations in Context

While precise option valuation may not be central to the case, instructors should note:

- In illiquid markets:
 - Prices may reflect **negotiated values** rather than model-implied values
 - Bid–ask spreads may be wide
 - Volatility estimates may be less stable

Therefore, the observed pricing may not align with textbook models (e.g., Black–Scholes), but may still be **economically rational within context**.

6. Developed vs Emerging Market Comparison

Dimension	Developed Markets	Jamaican / Emerging Market Context
Market Liquidity	Deep, continuous	Limited, episodic
Strategy Type	OTM, partial coverage	ITM, higher premium focus
Rebalancing	Frequent rolling	Limited or infrequent
Pricing	Model-driven	Negotiated / less efficient
Objective	Yield enhancement	Income + liquidity + constraint management

7. Teaching Insight (Central to This Case and the Project)

This divergence is not an anomaly; it is the **point of the case**. The case illustrates that **financial strategies that appear suboptimal under textbook assumptions may be rational responses to structural constraints**.

This aligns with the broader insight of the project:

- Financial decision-making cannot be evaluated independently of:
 - Market structure
 - Institutional context
 - Available instruments

8. Instructor Guidance

Instructors should guide students to move beyond:

- “Is this the optimal strategy under ideal conditions?”

Toward:

- “Is this the optimal strategy given the constraints faced?”

This shift is critical for understanding:

- Emerging markets
- Small open economies
- Real-world financial decision-making

The contrast between standard covered call strategies in developed markets and the approach observed in this case highlights a broader principle that context shapes

strategy and therefore what appears unconventional in one setting may represent a second-best optimum in another.

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative focuses on Mayberry Jamaican Equities Limited's use of a covered call strategy on a concentrated equity position, the underlying dynamics reflect broader themes of portfolio management, market structure, and incentive-driven behavior in constrained financial environments.

High-Level Insights from the Case Series

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding the dilemma and explaining how financial vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points, including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures
- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations
- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best.

In contrast, developed economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

Although this case is situated in Jamaica, its analytical relevance extends to other investment environments that share similar structural characteristics, including:

- Emerging and frontier equity markets with limited liquidity

- Markets characterized by concentrated holdings and limited diversification opportunities
- Investment firms operating without clearly defined benchmarks or rigid mandate constraints
- Contexts where derivatives are used opportunistically due to market limitations rather than as part of systematic overlay strategies

These conditions are common across many developing markets in the Caribbean, Africa, and parts of Asia, where portfolio managers must navigate structural constraints that differ significantly from those in developed markets.

At the same time, comparisons with developed market practices highlight important differences. In larger, more liquid markets, covered call strategies are typically implemented as systematic income overlays—often involving out-of-the-money options, partial coverage, and frequent rolling. These strategies are supported by deep derivatives markets, continuous liquidity, and sophisticated pricing mechanisms.

In contrast, the strategy observed in this case reflects adaptation to a constrained environment. The use of in-the-money options, higher coverage levels, and limited rebalancing opportunities can be understood as rational responses to market structure rather than deviations from sound financial theory.

Importantly, this case should not be interpreted as demonstrating that one approach is superior to another. Instead, it illustrates that financial strategies must be evaluated within their institutional and market context.

This case, therefore, offers analytical generalization, demonstrating how portfolio management decisions are shaped by the interaction of market structure, incentives, and available instruments. It highlights that strategies commonly viewed as suboptimal under idealized conditions may represent second-best solutions under constraint.

In this context, the Mayberry decision is not unique. It represents a broader class of investment decisions in which managers must balance income generation, liquidity management, and capital appreciation within environments that limit the set of feasible actions. The central insight is that context shapes strategy, and that effective financial decision-making requires adaptation to structural realities rather than strict adherence to textbook models.

References

Bodie, Z., Kane, A., & Marcus, A. J. (2014). *Investments* (10th ed.). McGraw-Hill Education.

CFA Institute. (2020). *CFA Program Curriculum: Portfolio Management and Wealth Planning*. CFA Institute.

Hull, J. C. (2021). *Options, Futures, and Other Derivatives* (11th ed.). Pearson Education.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.

Kahneman, D. (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux.

JN Fund Managers Limited. (2018). *Initial Public Offering: Mayberry Jamaican Equities Limited*. Global Investment Research Unit. Retrieved from <https://www.jnfunds.com>

JN Fund Managers Limited. (2018). *IPO Review: Mayberry Jamaican Equities Limited (Market Update)*. Retrieved from <https://www.jnfunds.com>

Mayberry Investments Limited. (n.d.). *About Us*. Retrieved from <https://www.mayberryinv.com>

Jamaica Stock Exchange. (n.d.). *Historical trading data and market reports*. Retrieved from <https://www.jamstockex.com>

Jamaica Observer. (2021, November 20). *Financial derivatives in Jamaica*. Retrieved from <https://www.jamaicaobserver.com/2021/11/20/financial-derivatives-in-jamaica/>

Jamaica Observer. (2018–2020). *Business and market reports on Supreme Ventures Limited and Jamaica Stock Exchange activity*. Retrieved from <https://www.jamaicaobserver.com>

Jamaica Gleaner. (2018–2020). *Business and financial coverage of Supreme Ventures Limited and Jamaican equity markets*. Retrieved from <https://jamaica-gleaner.com>

VENNECIA CHRISTIAN BARNES

Mayberry Jamaican Equities & The Written Call Option: A Consistent Investment Philosophy or A Covered Call Compromise?

“In investing, what is comfortable is rarely profitable, and what is profitable is rarely comfortable.”

Robert Arnott

Introduction

On the morning of August 6, 2019, the investment manager at Mayberry Jamaican Equities Limited (MJE Limited) sat quietly in his office, as he reviewed a number that had come to dominate recent internal discussions:

J\$34.32

That was the closing price of Supreme Ventures Limited (SVL), the stock in which the MJE Fund had the largest holdings, at the end of the previous day. In October 2018, Mayberry had written an over-the-counter (OTC) covered call option on 1,000,000 shares of SVL. The contract specified a strike price of J\$16 per share and a maturity date of October 4, 2020, and, in exchange, Mayberry received an upfront premium (approximately J\$5 million) earned in 2018 that had already been recognized as income.

The spot price at the beginning of the contract was J\$20.85, and the strategy reflected the investment manager’s implicit market view that Supreme Ventures’ upside beyond J\$16 was either limited or unlikely at the option’s maturity. Based on the structure of the option, the core trade-off for Mayberry was the premium received in exchange for the unlikely (in the

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

investment manager's mind) possibility of forfeiting a large capital gain if the SVL share price rose significantly.

Market developments evolved differently from the manager's initial expectations. After trending down towards J\$15 in November 2018, the SVL share price surged. At its current value, the structure implied a trade-off between the premium received and the potential for foregone gains under certain price scenarios. How should this decision be interpreted within the context of the firm's investment approach?

However, the manager knew the real challenge lay ahead. In a few months, Mayberry would hold its Annual General Meeting, and he would have to explain his decision to undertake this transaction to shareholders, analysts, and market commentators who were concerned that his covered call strategy deviated from their understanding of the kinds of risks the fund would take. He would have to answer the crucial question: "To what extent did the covered call transaction reflect an application of Mayberry's stated investment philosophy, and to what extent did it suggest a departure from it?"

Mayberry Jamaican Equities Limited (MJE) and Its Investment Philosophy

Mayberry Jamaican Equities Limited operated as an investment vehicle within the broader Mayberry Group, which had long been an active participant in Jamaica's capital markets. The firm's public messaging emphasized commitment to wealth creation through strategic investing. On its corporate platform, Mayberry described its approach succinctly as one that sought to help investors build wealth through disciplined investment strategies grounded in active portfolio management. However, the extent to which such discipline constrained the range of permissible strategies was less clearly defined.

This philosophy was reflected in the structure and behavior of MJE's portfolio. Rather than adopting a passive or index-oriented approach, the firm pursued opportunities in listed Jamaican equities, focusing on long-term capital appreciation supported by dividend income. Its strategy evolved in a relatively small, often illiquid market, where meaningful

positions in individual securities could materially influence portfolio outcomes. Research prepared at the time of MJE's initial public offering in July 2018 noted that the company provided investors with exposure to "a suite of Junior Market and Main Market stocks through a single publicly traded vehicle," while also highlighting that a substantial portion of its portfolio was concentrated in a small number of holdings.²

Exhibit 2. Extract from JN Fund Managers' Analysis of MJE IPO July 2018

- **Concentration Risk-** Based on estimations, Supreme Ventures Limited represents almost **50%** of the total equity portfolio using MJEL holdings as at June 30th, 2018. Therefore, significant changes in the price of SVL are likely to impact the Net Asset Value of the Company. Furthermore, over **80%** of the total portfolio is held in five (5) stocks namely Supreme Ventures Limited, Lasco Financial Services, Caribbean Producers Jamaica Caribbean Cement Company and Blue Power Limited.

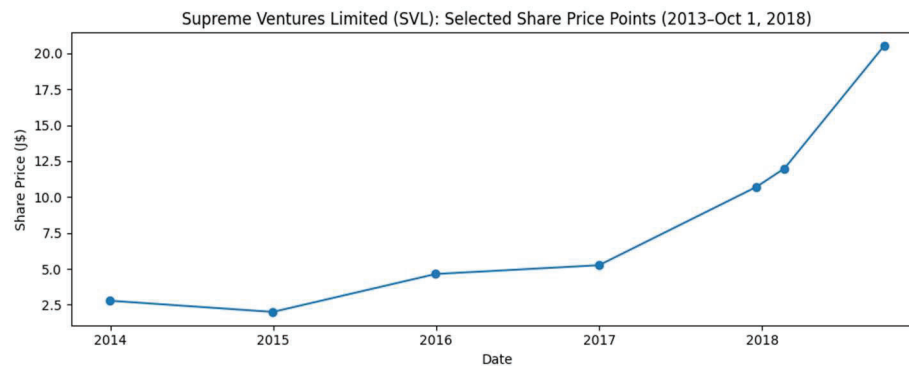
This concentration was not incidental. It reflected a deliberate approach to investing in which select opportunities were expected to drive performance, and over time, this approach came to define the firm's identity. It implied MJE's willingness to tolerate volatility, accept periods of underperformance, and rely on confidence in underlying investments rather than diversification alone.

Supreme Ventures Limited (SVL)

Supreme Ventures Limited had become one of those investments. As Jamaica's leading gaming and lottery company, SVL had established a strong position in the domestic market. Between 2013 and 2018, its share price rose steadily, supported by expanding product offerings, improving financial performance, and growing investor interest.

Within Mayberry's portfolio, SVL had grown into a significant holding, representing a meaningful source of both value and risk. Its performance had contributed positively to returns, but its increasing weight also raised internal questions about exposure and portfolio balance.

Exhibit 3. Supreme Venture Limited (SVL): Year-End Share Price (2013 – 2017 & October 1 2018)



By October 2018, the stock was trading above J\$20, a level that prompted internal debate at Mayberry about concentration risk and exit strategy.

The Jamaican Equities Market

At the same time, the realities of operating within the Jamaican capital market introduced practical considerations that were less easily captured in simplified descriptions. The market was characterized by periods of limited liquidity, concentrated ownership structures, and significant price movements in individual securities. Managing a portfolio under such conditions often required decisions that extended beyond passive holding. For some observers, the flexibility embedded in the mandate could be seen as a strength. It enabled the portfolio manager to respond to market conditions, manage exposures, and pursue opportunities as they arose. In the Jamaican market, where liquidity constraints could complicate large transactions, decisions regarding large, concentrated positions often required balancing liquidity constraints with portfolio objectives.”

Writing Calls in Developed Markets

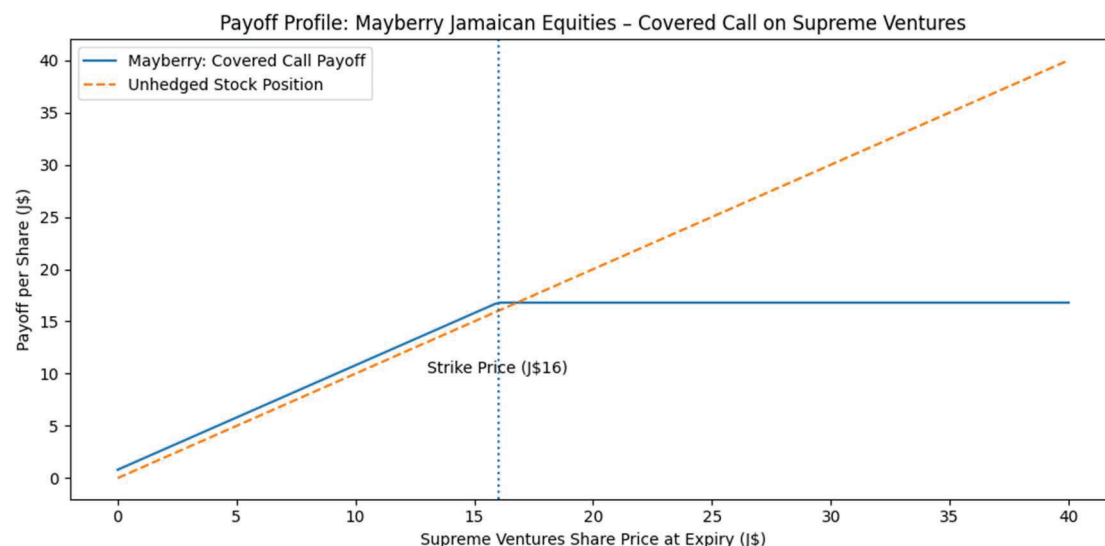
In more developed capital markets, the writing of call options, particularly in the form of covered call strategies, was often employed as a structured income-enhancement technique rather than as an opportunistic or tactical trade. Institutional investors, including pension funds, mutual funds, and dedicated option-income funds, frequently use covered

calls to generate incremental yield on existing equity positions, especially in environments where expected capital appreciation is moderate or uncertain. The strategy is typically embedded within a clearly defined investment policy framework, with parameters governing strike selection, maturity, and position sizing to ensure consistency with portfolio objectives and risk tolerance. Whether Mayberry's use of such a strategy aligned with similarly structured frameworks became a point of consideration.

The Option Decision

A significant portion of MJE Limited's equity portfolio was concentrated in less-liquid stocks, and the price of SVL, its largest holding, was assessed to have limited upside potential based on prevailing analysis. Against this backdrop, Mayberry faced a risk management choice. Continue holding a significant portion of SVL or sell a portion of its holdings. The firm considered an alternative approach to managing its exposure. Rather than selling the shares outright, in early October 2018, Mayberry wrote into an over-the-counter (OTC) call option on 1,000,000 SVL shares. The contract specified a strike price of J\$16 per share and had a maturity date of October 4, 2020. In exchange, Mayberry received an upfront premium of approximately J5 million.

Exhibit 5. Payoff Profile: Mayberry Jamaica Equities Limited – Covered Call on SVL



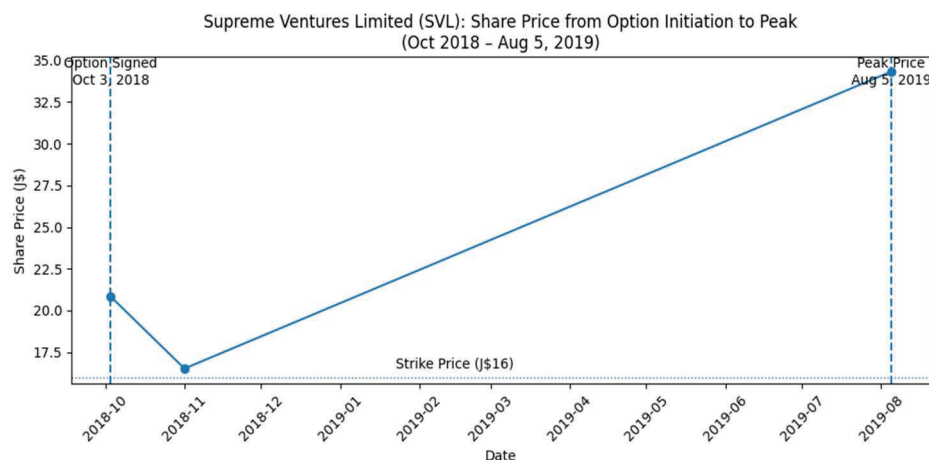
The structure effectively created a covered call as Mayberry retained ownership of the shares but surrendered upside above the strike in exchange for immediate income and a conditional exit price. The arrangement provided immediate income but limited the upside from potential increases in the stock's price (which the managers believed were unlikely).

At the time, the decision was framed within the broader context of portfolio management in a constrained market environment. The focus had been on balancing competing considerations: market liquidity, portfolio concentration, and the desire to maintain exposure to a company that remained fundamentally attractive.

A Supreme Surge

At first, consistent with MJE's analysis, the share price trended down towards J\$15 in November 2018. Then, the SVL share price increased significantly over subsequent months, reaching a high of J\$34.32 as of the previous day. At its current value, the structure implied a trade-off between the premium received and the potential for foregone gains under certain price scenarios.

Exhibit 4. Supreme Ventures Limited Monthly Average Share Price (October 2018 to August 2019)



Source: <https://www.jamstockex.com>

The stock attracted growing market attention, with commentators highlighting its performance and growth prospects. The implications of the option structure became more observable as market conditions evolved. Within the firm, conversations began to revisit the earlier decision. The same concerns about risk exposure that had informed the original transaction were now being reconsidered in light of new information.

Consistent or A Misalignment of Strategy? A Competitor's View

The onlookers were vocal. So far, the structure implied a trade-off between the premium received and the potential for foregone gains under certain price scenarios, and there was theoretically no limit on how high the share price could rise. The potential opportunity cost increased as the share price moved further above the strike price. Shareholders, analysts, and market commentators were concerned that this covered call strategy deviated from their understanding of the kinds of risks the fund would take, given the company's marketed philosophy.

A competing investment firm, JN Fund Managers Limited, in its analysis of the July 2018 IPO, highlighted a degree of ambiguity between Mayberry Jamaican Equities' stated investment philosophy and the practical boundaries of its risk-taking. While acknowledging the firm's experience and active management approach, the analysis cautioned that the portfolio's structure and the incentives embedded in the investment management arrangement could lead to outcomes that are not fully aligned with investor expectations.

The report had further observed that the company's performance would "not be compared to any identified target return or benchmark," raising questions about how risk-adjusted performance would be evaluated. More pointedly, it warned that "under the Investment Management Agreement... [the manager] will be paid an annual performance fee which creates an incentive... to invest and reinvest the Company's assets in a manner which may be riskier or more speculative than otherwise would be the case." This raised broader questions regarding how closely the firm's actions were bound by its stated philosophy.

The AGM Dilemma

As the Annual General Meeting approached, the investment manager prepared for the discussion that lay ahead. He anticipated that the conversation would return to the decision made in October 2018. Questions would likely focus on the reasoning behind the transaction and the broader implications of the strategy. More fundamentally, he expected the discussion to extend beyond the mechanics of the option itself and to touch on how Mayberry defined its approach to investing. It would examine whether the transaction aligned with the firm's stated philosophy of building wealth through disciplined investment strategies. It would invite reflection on how decisions are made when managing concentrated positions in a market characterized by both opportunity and constraint.

He turned again to the number on his screen.

J\$34.32

In his mind, he returned to the question that would frame the discussion. To what extent did the covered call transaction reflect an application of Mayberry's stated investment philosophy, and to what extent did it suggest a departure from it? The answer depended not only on the outcome of the transaction but on how one interpreted the firm's mandate, risk boundaries, and investment philosophy.

Appendix A. The Investor Policy Statement

An Investment Policy Statement (IPS) is widely regarded as a foundational document in portfolio management, serving as a strategic guide to the planning, implementation, and oversight of an investment program. It establishes a structured framework for decision-making, governance, risk management, and accountability. In practice, an IPS typically addresses the following dimensions:

First, it defines the scope and purpose of the investment program, including the identity of the investor, the portfolio's objectives, and the decision-making structure. This section provides context and clarifies who is responsible for managing assets and under what authority.

Second, it outlines the governance structure, specifying the roles and responsibilities of those involved in determining investment policy, executing investment decisions, and monitoring outcomes. It also establishes processes for reviewing and updating the policy over time.

Third, it articulates the portfolio's investment, return, and risk objectives. This includes defining the desired balance between capital appreciation and income generation, specifying acceptable risk levels, and identifying constraints such as liquidity needs, regulatory requirements, and investment horizons.

Fourth, it incorporates a risk management framework that identifies how risks are measured, monitored, and reported. This may include guidelines for asset allocation, diversification, rebalancing, and the use of specific financial instruments.

Finally, the IPS often reflects the investor's underlying investment philosophy, including beliefs about market efficiency, the role of active management, and the extent to which opportunistic or tactical strategies may be employed.

Appendix B: Background on Mayberry Jamaican Equities Limited & Investment Philosophy (Based on IPO Disclosures)

Mayberry Jamaican Equities Limited (MJE) is a publicly listed investment company established in 2017 as part of the broader Mayberry Group, one of Jamaica's prominent financial services firms with operations spanning stockbroking, investment banking, asset management, and proprietary trading. The company was created to provide investors with access to a professionally managed portfolio of Jamaican equities, structured within a listed corporate vehicle. Mayberry Jamaican Equities Limited (MJE) was established as an investment holding company with a mandate centered on participation in Jamaica's equity markets. The company's investment philosophy, as reflected in its initial public offering (IPO) documentation and supporting research, was anchored in the pursuit of total return through a combination of capital appreciation and dividend income. At its core, the strategy emphasized investment in publicly listed Jamaican equities, particularly within the Main Market and Junior Market of the Jamaica Stock Exchange. The IPO materials indicated that the company held positions across multiple listed securities and would continue to allocate capital toward equities as its primary asset class. Over time, the portfolio reflected a deliberate shift away from fixed-income instruments toward equity securities, reinforcing the company's orientation toward capital growth and market-driven returns. The philosophy was further characterized by an explicit commitment to active portfolio management. Research prepared by JN Fund Managers in connection with the IPO described the company as seeking to "maximize total return through strategic positioning in selected securities," highlighting the role of managerial discretion in security selection and portfolio construction. This approach implied that returns would not simply track the broader market but would depend on the investment manager's ability to identify opportunities and adjust exposures over time. At the same time, the IPO disclosures revealed that this active approach could involve concentrated positions in a limited number of securities. A significant portion of the portfolio was held in a small group of stocks, including large exposures to individual companies. Such concentration suggested a conviction-based investment style, in which the portfolio manager allocated capital selectively rather than broadly diversifying across the market. The investment philosophy also incorporated a strong emphasis on income distribution, with the company indicating its intention to adopt a dividend policy of distributing up to 75% of net profits, subject to available reserves. This feature positioned the company not only as a growth-oriented equity vehicle

but also as a source of income for shareholders. However, the extent to which these characteristics constrained the use of derivative strategies was not explicitly specified.

Appendix C. Extract from JN Fund Managers' Analysis of MJE IPO July 2018

Analyst's Opinion: Mayberry Jamaican Equities Limited

Recommendation	DO NOT BUY	Implied Upside	6.79%
Offer Price	J\$7.56	Implied Dividend Yield	-
Estimated Fair Value	J\$8.07	Implied Total Return	6.79%

Mayberry Investments Limited has accumulated a variety of local equities through its investment vehicle Mayberry Jamaican Equities Limited (MJEL) over the last decade. The Company's current portfolio offers investors the opportunity to access a suite of Junior Market and Main Market stocks through a single a publicly traded vehicle. Investors will also benefit from the extensive experience of the Mayberry team who has actively managed the portfolio since inception. Our analysis reveals that while MJEL's current portfolio is allocated across over thirty (30) local stocks, we estimate that over 80% is concentrated in five (5) stocks. We believe this concentration presents a material risk to potential investors and overly exposes them to a few core portfolio holdings. Additionally, the Investment Manager will be compensated under a fee structure that we believe does not appropriately align their incentives with that of the investors. Finally, the performance of the Company's investment portfolio will not be compared to any identified target return or benchmark.

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Investment Positives and Negatives

Positives

- **Favourable Tax Structure-** The Company is a St. Lucian International Business Company ("IBC") domiciled in St. Lucia. According to the prospectus, dividends paid by MJEL are exempt from Jamaican income tax by virtue of the CARICOM Double Taxation Convention. Such dividends are also exempt from St. Lucia withholding tax by virtue of the Company being an IBC.
- **Generous Dividend Policy-** Mayberry Jamaican Equities Limited will seek to adopt a liberal dividend policy of up to 75% of the distributable after-tax profits of the Company at the discretion of management.
- **Exposure to Tightly held Equities-** MJEL will provide investors exposure to tightly held local equities or equities with limited market float.
- **Experienced Investment Manager-** MJEL's investment managers have several decades of combined experience in local and international capital markets.

Negatives

- **Concentration Risk-** Based on estimations, Supreme Ventures Limited represents almost **50%** of the total equity portfolio using MJEL holdings as at June 30th, 2018. Therefore, significant changes in the price of SVL are likely to impact the Net Asset Value of the Company. Furthermore, over **80%** of the total portfolio is held in five (5) stocks namely Supreme Ventures Limited, Lasco Financial Services, Caribbean Producers Jamaica Caribbean Cement Company and Blue Power Limited.
- **Illiquidity of Portfolio Assets-** A significant portion of the MJEL's equity portfolio is concentrated in less liquid Junior Market stocks. Although this represents a benefit to shareholders in accessing stocks with limited market float, it would reduce the flexibility of the Company to actively trade these stocks.
- **Conflicts of Interest-** Due to the structure of Mayberry Investments Limited and its subsidiaries, there are likely to be a variety of instances in which conflicts of interest will arise and this may impact the objectivity of investment decisions carried out by MJEL. MJEL has established a Conflicts Committee in order to address any needs for potential conflict considerations with two independent Committee members.
- **Potentially Risky Investment Strategy-** Under the Investment Management Agreement between the Company and Mayberry Asset Manager (MAM), the latter will be paid an annual performance fee which creates an incentive for MAM to invest and reinvest the Company's assets in a manner which may be riskier or more speculative than otherwise would be the case.
- **Lack of a Benchmark, Hurdle Rate or High Watermark-** MJEL has not identified any benchmark against which the performance of its portfolio will be compared or any target return against which they will be held accountable. The compensation structure of the investment manager (**0.50%** of Net Asset Value and **8.0%** of

Appendix E. A Covered Call

A covered call is an options strategy in which an investor who owns an underlying asset, typically shares of stock, sells (or “writes”) a call option on that same asset. The strategy combines a long position in the stock with a short position in a call option, creating a modified payoff profile relative to holding the stock alone. A call option gives the buyer the right, but not the obligation, to purchase a specified number of shares at a predetermined price, known as the strike price, on or before a specified date. In exchange for granting this right, the seller of the option receives an upfront payment known as the premium. When an investor writes a call option while already holding the underlying shares, the position is described as “covered,” because the investor can deliver the shares if the option is exercised. The covered call strategy alters both the return potential and risk profile of the underlying equity position. The investor retains exposure to stock price declines, although the premium received provides a small buffer against losses. However, the investor gives up potential gains above the strike price. If the stock price rises above the strike, the option may be exercised, and the investor will be required to sell the shares at the strike price, regardless of how high the market price has risen. As a result, the payoff structure of a covered call can be understood as having limited upside and partially offset downside. The maximum gain occurs when the stock price is at or above the strike price at expiration, in which case the investor earns the difference between the purchase price of the stock and the strike price, plus the premium received. The maximum loss occurs if the stock price falls to zero, although this loss is reduced by the amount of the premium. Covered calls are commonly used for several purposes. Some investors employ the strategy to generate additional income from an existing equity position, particularly in markets where expected price appreciation is modest. Others may use it to establish a target exit price for a stock they are willing to sell, while earning a premium in the interim. The strategy is also sometimes associated with efforts to reduce short-term volatility in portfolio returns. However, the use of covered calls involves trade-offs. By accepting the premium, the investor exchanges uncertain future upside for certain current income. The attractiveness of the strategy, therefore, depends on expectations about future price movements, as well as the investor’s objectives, risk tolerance, and investment horizon.

Hedging, Positioning, or Both? Barita Investments and a US\$63 Million Non-Deliverable Forward Instructor Note

Case Synopsis

This case, *Hedging, Positioning, or Both? Barita Investments and a US\$63 Million Non-Deliverable Forward*, places students in late November 2020 as the senior management team of prepares for a board presentation following a significant derivative gain. Barita Investments Limited (BIL), a Jamaican non-bank financial institution, had entered into a US\$63 million non-deliverable forward (NDF) contract with its majority shareholder, Cornerstone Financial Holdings Limited (CFHL), on August 24, 2020. At settlement on October 1, 2020, the appreciation of the Jamaican dollar generated a gain of approximately J\$720 million, equivalent to roughly 26% of annual net profit.

The case unfolds against the backdrop of heightened foreign-exchange volatility during the COVID-19 pandemic, characterized by wide intra-year exchange-rate movements and uncertainty in macroeconomic conditions. Two days after executing the NDF, Barita launched an oversubscribed J\$13.5 billion Additional Public Offering (APO), materially expanding its balance sheet during the life of the derivative. By settlement, the firm's foreign-currency exposure had evolved, introducing ambiguity in assessing the relationship between the derivative position and underlying exposure.

The central tension of the case lies in how the transaction should be interpreted. While the NDF was executed within regulatory guidelines and aligned with stated efforts to

This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

manage currency risk, its size relative to net USD exposure and earnings, combined with the timing of the APO and the magnitude of the gain, raised questions among stakeholders. Market commentary highlighted both the firm's strong performance and the increasing contribution of trading-related income, framing the outcome within broader debates about risk-taking, governance, and financial innovation in small emerging markets.

Students are required to evaluate the transaction from an ex-ante perspective, distinguishing between hedging and directional positioning, and assessing the implications of derivative scale, liquidity risk, and earnings sensitivity. The case invites analysis of forward pricing, hedge ratios, and stress scenarios, while also encouraging consideration of governance frameworks appropriate for managing financial risk in relatively thin and highly visible markets.

At its core, the case challenges students to move beyond outcome-based evaluation and confront a more fundamental question: how should firms assess and govern risk management decisions when those decisions materially shape financial performance? This case is best taught as a currency risk management decision under constraint, rather than a purely technical derivatives exercise. The case is suitable for graduate-level courses in corporate finance, risk management, derivatives, public finance, or international financial management.

Learning Objectives

After analyzing the case, students should be able to:

1. Distinguish Between Hedging and Positioning (Ex-Ante)
2. Derive and Interpret Forward Pricing
3. Assess Hedge Effectiveness and Exposure Alignment
4. Conduct Liquidity and Earnings Stress Testing
5. Evaluate Risk Governance in Emerging Markets

6. Formulate Forward-Looking Risk Management and Governance Recommendations

Teaching Outline

A teaching plan for a 90-minute session is seen below:

Section & Key Questions	Time
Cold Open: Outcome vs Decision: Barita made J\$720M (~26% of profit). Was this good risk management or something else?	5 mins
Ex-Ante vs Ex-Post Thinking: “Should we evaluate this transaction based on the outcome?”	10 min
NDF Structure & Forward Rate — “What forward rate did Barita lock in?” “What does the +J\$5.5 buffer imply?”	15 min
Evaluate Exposure & Hedge Alignment. “How does the APO affect your assessment?”	15 min
Perform Liquidity & Stress Testing	15 min
Discuss Market Context & Governance	15 min
Discuss Forward-Looking Recommendations: “What changes, if any, should Barita’s board implement going forward?”	10 min
Closing Reflection: <i>When does risk management become positioning?</i>	5 min
Total	90 min

Discussion Questions

1. To what extent can Barita’s use of the US\$63 million NDF be interpreted as hedging an identifiable foreign-exchange exposure versus taking a directional view on the Jamaican dollar?
2. Using the case data, determine the implied forward rate embedded in the NDF and interpret its economic meaning.

3. Evaluate whether the size of the NDF was appropriately aligned with Barita's underlying foreign-currency exposure.
4. Assess the financial impact of adverse exchange-rate movements (e.g., J\$165/USD and J\$170/USD) on Barita's NDF position.
5. How does the size and structure of Jamaica's foreign-exchange market influence governance expectations?
6. If you were advising Barita's board after this transaction, what changes, if any, would you recommend to its derivative risk management framework

Pre- Discussion Anchoring Exercise: "Locking the Price vs Betting on the Future"

Objective: To help students internalize the difference between hedging vs positioning, deliverable vs cash-settled exposure, and risk reduction vs risk transformation

Scenario 1: The Phone Purchase (Hedging vs Positioning)

You plan to buy a new phone in 2 months for US\$1,000 and today, the exchange rate is J\$150/USD. A store offers you a deal: You can lock in the price today at J\$155/USD for delivery in 2 months. Ask students: If you lock in the price, are you hedging or positioning? Why? What happens if the exchange rate moves to J\$170? What happens if it moves to J\$140?

The key takeaway is that locking the price is equivalent to hedging a known future need. The upside is sacrificed (opportunity cost), and the downside is protected (risk reduction). This is analogous to a deliverable forward.

Scenario 2: The "No Phone" Contract (NDF Equivalent)

Now assume you are not sure if you will buy the phone, but the store offers the same contract: Lock in J\$155/USD and you will NOT receive the phone instead:

- If the rate goes above 155, you receive cash
- If it goes below 155, you pay cash

Ask students: “Is this still hedging? Why or why not? What new risk has been introduced? How is this different from Scenario 1?”

The key lesson is that when there is no underlying transaction, it decouples your real need and creates cash settlement risk. This is analogous to an NDF. Risk is no longer embedded in a purchase, but it becomes a standalone financial exposure

Scenario 3: Scaling the Position (Barita Analogy)

Now, assume you take contracts equivalent to US\$10,000 worth of phones, but you only plan to buy US\$1,000. Ask students: What has changed? Is this still hedging? What happens if the exchange rate moves sharply against you?

Key point here is that when the notional > need, that is an over-hedge / over-positioning. Exposure becomes earnings-driven, not transaction-driven. Losses/gains can become material. Then make a direct link to Barita:

- US\$63M vs ~US\$55M exposure
- Scale transforms the nature of the decision

Scenario 4: The Cash Shock (Liquidity Risk)

Now, assume the rate moves sharply against you, and you must pay J\$500,000 immediately. Ask students: What kind of risk is this? Is this the same as simply paying more for a phone?

The key point here is that this is liquidity risk, not just higher cost, as there is an immediate cash obligation. This is the key distinction of an NDF. Then

Wrap-Up Question (Bridge to Case) “At what point did you stop hedging and start taking a position?”

Discussion and Analysis

Question 1. To what extent can Barita’s use of the US\$63 million NDF be interpreted as hedging an identifiable foreign-exchange exposure versus taking a directional view on the Jamaican dollar?

An ex-ante evaluation requires assessing the structure, scale, and context of the transaction using only information available at the time of execution. Barita had articulated a strategy of “tactically positioning” its balance sheet to manage currency risk amid heightened volatility, and the Jamaican dollar had exhibited intra-year movements exceeding J\$12. This environment supports the plausibility of a hedging rationale.

The structure of the NDF is consistent with risk management intent. The implied forward rate (approximately J\$158.67) was set above the prevailing spot rate of J\$153.13, creating a buffer of approximately J\$5.5 ($\approx 3.6\%$). This suggests that Barita was not relying on immediate appreciation to justify the position; instead, it allowed for moderate depreciation without incurring losses. Such structuring is consistent with a volatility-aware hedge designed to tolerate short-term fluctuations.

However, scale introduces ambiguity. The notional of US\$63 million slightly exceeded the firm’s reported net USD exposure ($\approx$ US\$55–58 million), raising the possibility of over-hedging or positioning. Additionally, the APO—announced two days after execution—implies that the firm anticipated balance-sheet expansion, which may justify the size ex ante. Yet the fact that exposure was evolving during the life of the contract complicates the classification.

The most defensible conclusion is that the NDF represents risk-tolerant hedging rather than pure speculation. The structure reflects disciplined design, but the scale elevates the transaction beyond a mechanical hedge. The key issue is not binary classification, but whether the firm's risk appetite and governance framework were aligned with the magnitude of potential outcomes.

Question 2. Using the case data, determine the implied forward rate embedded in the NDF and interpret its economic meaning.

To determine the implied forward rate embedded in Barita's USD 63 million non-deliverable forward (NDF), we start from first principles: an NDF is cash-settled at maturity, with settlement equal to the difference between the contracted forward rate and the prevailing spot rate at settlement, multiplied by the notional amount. Because no principal is exchanged, the entire economic content of the trade at maturity is captured by that differential.

Step 1: Specify the settlement convention and variables

Let:

- (N) = notional amount in USD = 63,000,000
- (S_T) = spot rate at settlement (USD/JMD) = 147.24
- (F) = contracted forward rate (USD/JMD) = unknown (what we want to infer)
- (G) = reported gain in JMD = 719.98 million

The standard NDF payoff to the party that benefits when the settlement spot is below the contracted forward is:

$$[G = (F - S_T) \times N]$$

The case reports that Barita earned a gain when the Jamaican dollar appreciated to J\$147.24, consistent with Barita receiving a positive payoff when ($S_T < F$).

Step 2: Convert the total gain into a “per USD” differential

The simplest way to infer the forward rate (F), is to first express the gain as a JMD amount per USD of notional:

$$G/N = \text{J\$}719,980,000 / \text{US\$}63,000,000 = \text{J\$}11.4283 \text{ per USD}$$

The contract was priced so that the forward rate exceeded the spot rate by about J\$11.43 per USD, resulting in a total gain of J\$719.98 million on a USD 63 million notional position.

Step 3: Solve directly for the implied forward rate

Rearrange the payoff equation:

$$F = S_T + (G / N)$$

Substitute the values:

$$F = \text{J\$}147.24 + \text{J\$}11.4283 = \text{J\$}158.67$$

This is the implied forward rate consistent with the facts of the case.

Step 4: Cross-check

A quick validation confirms that:

$$(\text{J\$}158.67 - \text{J\$}147.24) = \text{J\$}11.4283, \text{J\$}11.4283 \times 63,000,000 = \text{J\$}719,982,900$$

Minor differences from J\$719.98m are due to rounding (spot rates and gains are likely reported to two decimal places).

Economically, this forward rate represents the exchange rate at which Barita effectively locked in the future value of USD exposure. The difference between the forward rate and the spot rate at execution (J\$153.13) is approximately J\$5.54, which serves as a tolerance band. This means that the Jamaican dollar could depreciate by up to J\$5.54 before the position would generate a loss.

This structure has important implications. First, it indicates that the position was not predicated on immediate currency appreciation. Instead, it was designed to absorb moderate adverse movements, suggesting a focus on managing volatility rather than betting on a precise outcome. Second, the forward rate embeds expectations about future exchange-rate movements and compensation for risk over the contract horizon.

Finally, the forward rate determines the asymmetric payoff profile: while gains increase as the currency appreciates, losses are capped within a defined range before becoming material. This highlights how forward pricing shapes both risk exposure and economic outcomes.

Question 3. Evaluate whether the size of the NDF was appropriately aligned with Barita's underlying foreign-currency exposure.

Hedge effectiveness is typically assessed by comparing the derivative notional to the underlying exposure it is intended to offset. In this case, Barita's NDF notional of US\$63 million slightly exceeded its reported net USD exposure of approximately US\$55–58 million, suggesting a potential over-hedge at the point of execution.

However, this assessment is complicated by the timing of the APO. The firm raised approximately J\$13.5 billion (≈US\$88 million) during the life of the NDF, materially expanding its balance sheet before settlement. If the firm anticipated deploying these funds into USD-linked assets, the derivative may have been sized with forward-looking exposure in mind rather than static exposure at execution.

This introduces a key distinction between static and dynamic hedging. A static hedge would match existing exposure at a point in time, while a dynamic hedge anticipates changes in exposure. If the APO proceeds were expected to increase USD exposure, the NDF could be interpreted as aligned with future needs. However, the case does not indicate that such a deployment had fully occurred by the time of the settlement.

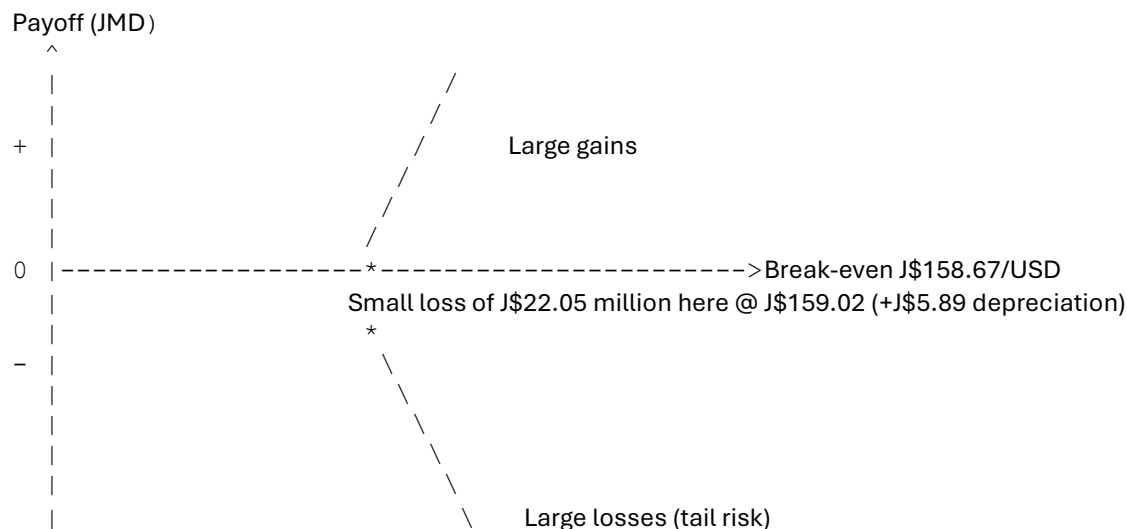
Therefore, while the NDF may have broadly aligned with exposure trends, its size relative to the reported net exposure suggests it was not a precise hedge. Instead, it likely represented a hybrid position, combining exposure management with an element of balance-sheet positioning.

Question 4. Assess the financial impact of adverse exchange-rate movements (e.g., J\$165/USD and J\$170/USD) on Barita’s NDF position.

Table 1: Liquidity Stress Test Illustration

Settlement Spot (JMD per USD)	Outcome
147.24 (actual)	+\$719.98m gain
153.13 (signing spot)	+\$348m gain
158.67 (break-even)	0
159.02 (+5.89 depreciation)	-\$22.05m loss
165 (Hypothetical @J\$6.63 over buffer embedded in the NDF rate)	-\$398.8m loss
170 (Hypothetical @ J\$11.33 over buffer embedded in the NDF rate)	-\$713.8m loss

Payoff Diagram (Conceptual)



The NDF payoff is linear and symmetric: the same movement that produced a J\$720m gain would have produced a J\$720m loss had the exchange rate moved in the opposite direction. Relative to Barita's FY2020 results, that loss would have equaled:

- ~26% of net profit
- ~74% of FX-related income

These outcomes are economically significant. A J\$399 million loss would represent approximately 14–15% of annual profit, while a J\$714 million loss would approach 26% of earnings, equivalent to the realized gain.

The key insight is that the NDF converts exchange-rate movements into immediate cash settlement obligations. Unlike unhedged exposure, where losses are often accounting-based, the NDF requires a direct liquidity outflow. This introduces liquidity risk, particularly if adverse movements coincide with funding constraints. Given that intra-year currency movements exceeded J\$12, such scenarios were not implausible. Therefore, the

transaction exposed Barita to earnings concentration risk and liquidity stress, even if it reduced uncertainty around exchange rates.

Question 5. How does the size and structure of Jamaica's foreign-exchange market influence governance expectations?

Market size plays a critical role in shaping governance expectations. Jamaica's foreign-exchange market is relatively small and less liquid than developed markets, meaning that large transactions are more visible and potentially more impactful.

First, scale amplification occurs. A derivative position that is modest in a large market may be material in a smaller one, both economically and reputationally. In this case, the NDF gain represented 26% of earnings, making it highly visible to stakeholders.

Second, liquidity constraints are more binding. In a thin market, adverse movements may coincide with reduced access to funding, increasing the risk associated with cash-settled instruments.

Third, reputational and regulatory scrutiny is heightened. Financial institutions play a more prominent role in small economies, and large gains or losses may trigger questions about risk-taking and governance.

As a result, boards in such environments must adopt a more conservative and transparent approach to derivative usage, ensuring that exposure levels are aligned not only with internal capacity but also with external expectations.

Question 6. If you were advising Barita's board after this transaction, what changes, if any, would you recommend to its derivative risk management framework?

The transaction highlights the need for a more structured approach to derivative governance. Several enhancements could be considered.

First, the firm should implement explicit hedge ratio limits, ensuring that derivative notional remains aligned with underlying exposure, whether measured statically or dynamically. This would reduce ambiguity around intent.

Second, liquidity stress testing should be formalized. Scenarios such as J\$165 and J\$170 should be routinely evaluated to ensure that the firm can meet potential cash obligations without strain.

Third, the board should establish clear risk appetite thresholds, particularly for transactions that could materially impact earnings. This includes defining acceptable levels of earnings volatility arising from derivative positions.

Fourth, improved disclosure and documentation would enhance transparency, clarifying the linkage between derivative positions and underlying exposure.

Finally, the firm could adopt dynamic exposure monitoring, particularly during periods of balance-sheet expansion, to ensure that hedging strategies remain aligned with evolving conditions.

These measures would not necessarily restrict derivative usage but would ensure that it remains consistent with disciplined risk management and governance expectations.

Appendix A: Currency Management Strategy — Concept and Relevance

1. Purpose of This Section

This section provides a conceptual overview of currency management strategy, which underpins the decision-making context of this case. It is intended to support instructors, particularly those less familiar with emerging market foreign exchange environments, in framing the case within a broader financial and strategic perspective.

2. What is a Currency Management Strategy?

A currency management strategy refers to the set of decisions and policies through which a firm, financial institution, or government manages its exposure to exchange rate movements.

These strategies are designed to address:

- **Transaction risk** (cash flows in foreign currency)
- **Translation risk** (valuation of foreign assets and liabilities)
- **Economic risk** (long-term competitiveness and value)

At its core, currency management involves deciding how much exchange rate risk to accept, reduce, or transfer.

3. Why Currency Management is Important

Currency risk is particularly significant in small open economies, where imports are priced in foreign currency, debt obligations may be denominated in USD, and exchange rate movements quickly transmit into inflation and costs. As a result, firms face earnings volatility, governments face fiscal and external-balance pressures, and financial institutions face balance-sheet mismatches. Currency management is therefore not optional; it is central to financial stability and performance.

4. Core Approaches to Currency Management

Currency management strategies typically fall into three broad categories:

A. Passive Exposure (No Hedging)

- Accept exchange rate movements
- Suitable when:
 - Exposure is small
 - Hedging costs are high

B. Hedging Strategies (Risk Reduction)

- Use financial instruments to reduce exposure:
 - Forwards
 - Options
 - Non-deliverable forwards (NDFs)

Objective: Stabilize cash flows and reduce downside risk

C. Active Currency Positioning (Strategic View)

- Take positions based on expectations of currency movements
- May involve:
 - Tactical hedging
 - Selective exposure

Objective: Enhance returns or manage macroeconomic expectations

5. Currency Management in the Case Context

In this case, the strategy under consideration sits at the intersection of hedging and positioning.

Key features include:

- Use of derivative instruments (e.g., NDFs)
- Exposure to exchange rate movements
- Interaction between:
 - Risk management
 - Return objectives

This creates an important interpretive question: Is the strategy primarily a hedge, or does it reflect a directional view on the currency?

6. Structural Constraints in Emerging Markets

Currency management strategies in emerging markets differ from those in developed markets due to:

A. Limited Hedging Instruments

- Fewer derivative products available
- Less liquidity in FX markets

B. Foreign Exchange Constraints

- Restricted access to hard currency
- Central bank intervention

C. Market Imperfections

- Wider bid–ask spreads

- Limited price transparency

As a result, strategies may appear more opportunistic or hybrid than textbook hedging approaches.

7. Developed vs Emerging Market Comparison

Dimension	Developed Markets	Emerging Market Context
FX Market Depth	Deep, liquid	Limited, constrained
Hedging Instruments	Wide range	Restricted
Strategy Type	Structured hedging programs	Hybrid (hedging + positioning)
Pricing	Efficient, continuous	Less efficient, episodic
Objective	Risk optimization	Risk management under constraint

8. Teaching Insight (Critical for Instructors)

Instructors should guide students to recognize that currency management is not purely technical; it is shaped by market structure, institutional constraints, and available instruments.

The key question is not: “Is this the optimal textbook hedge?” but: **“Is this the optimal strategy given the constraints faced?”**

9. Linking to the Case Decision

The strategy in this case should therefore be evaluated as a response to currency risk exposure, a reflection of market constraints, and a decision balancing risk reduction, liquidity, and potential return. This case highlights a broader principle central to the project: **Currency management strategies cannot be evaluated in isolation from context.** Therefore, what may appear as speculation in one setting may represent pragmatic risk management in another.

Cross-Case Insights and Generalizability

This case forms part of a broader set of interconnected cases examining financial decision-making under constraint in small open economies. While the narrative focuses on Barita Investments Limited's use of a US\$63 million non-deliverable forward (NDF) and the resulting gain, the underlying dynamics reflect broader challenges in currency risk management, derivative use, and governance in constrained foreign-exchange environments.

High-Level Insights from the Case Series

When interpreted within the broader case set, several system-level insights emerge that are directly relevant to understanding the dilemma and explaining how financial vulnerability operates in small open economies. These insights, summarized below, highlight fundamental structural differences between small and large economies and provide a system-level understanding of decision-making under constraint.

1. Vulnerability is Distributed, Not Diversified

In small open economies, financial vulnerability is not concentrated in a single dominant source but is distributed across multiple interconnected weak points, including foreign exchange exposure, energy dependence, banking structures, and capital markets.

Unlike large, developed economies, where diversification across deep markets dilutes risk, small economies experience cumulative vulnerability, where multiple modest exposures can collectively destabilize the system.

2. Shock Transmission is Amplified, Not Absorbed

Shocks in small open economies do not remain localized. Instead, they are transmitted across layers of the system, from external conditions to financial institutions, markets, and ultimately policy responses.

Because these systems lack depth, liquidity, and buffering capacity, shocks are amplified rather than absorbed, resulting in disproportionately large economic and financial effects relative to the initial disturbance.

3. Risk Management is Fragmented, Not Systemically Integrated

Risk is managed within institutional silos:

- Firms hedge exposures
- Banks manage balance sheets
- Governments intervene through policy

However, these actions are often not fully coordinated, resulting in fragmented risk management. Unlike developed markets, where risk is more systemically integrated through deep markets and regulatory frameworks, small economies rely on uncoordinated, domain-specific decisions, which may not collectively optimize system stability.

4. Decision Evaluation is Outcome-Dominated, Not Process-Informed

Financial and policy decisions in small open economies are frequently evaluated based on observable outcomes, rather than the quality of ex ante reasoning.

This creates systematic bias:

- Prudent decisions may be criticized if outcomes are unfavorable
- Risk management strategies (e.g., hedging) may be misunderstood when risks do not materialize

In contrast, developed markets are more likely to incorporate process-based evaluation, recognizing uncertainty and probabilistic decision-making.

5. Policy Space is Binding, Not Flexible

Decision-makers in small open economies operate under tight structural constraints, including:

- Limited foreign exchange reserves
- Market confidence considerations
- External economic pressures

As a result, decisions are not optimization exercises but constraint-bound adaptations, where available choices are often second-best.

In contrast, developed economies benefit from greater policy flexibility due to stronger institutions, deeper markets, and more resilient macroeconomic frameworks.

Integrative Insight

Taken together, these five insights demonstrate that small open economies are not simply smaller versions of large economies; they are structurally different systems in which vulnerability is distributed, mobile, and amplified through interconnected layers. These dynamics fundamentally shape how financial decisions are made, interpreted, and evaluated under conditions of constraint.

Generalizability of the Case

Although this case is situated in Jamaica, its analytical relevance extends to other financial systems that share similar structural characteristics, including:

- Emerging and frontier markets with limited foreign exchange liquidity
- Economies where access to hard currency is constrained
- Financial institutions operating in shallow derivative markets
- Contexts where currency risk management must be conducted with limited instruments and imperfect pricing

These conditions are common across many developing economies in the Caribbean, Africa, and parts of Asia, where foreign exchange markets are smaller, less liquid, and more tightly regulated than in developed economies.

At the same time, comparisons with developed markets highlight important differences. In larger, more liquid foreign exchange markets, firms typically implement structured currency management programs using a wide range of instruments, including deliverable forwards, options, and dynamic hedging strategies. These markets allow for precise alignment between exposure and hedging instruments, as well as continuous adjustment of positions.

In contrast, the strategy observed in this case reflects a hybrid approach shaped by constraint. The use of a large NDF position, relative to underlying exposure, can be understood as a response to limited hedging alternatives, evolving balance sheet conditions, and the need to manage both risk and return within a constrained environment.

Importantly, this case should not be interpreted as demonstrating that the transaction is either purely hedging or purely speculative. Rather, it illustrates how, in constrained markets, the distinction between hedging and positioning becomes less clear, and strategies may incorporate elements of both.

This case, therefore, offers analytical generalization, demonstrating how currency management strategies are shaped by the interaction of market structure, institutional constraints, and risk governance frameworks. It highlights that derivative usage cannot be evaluated solely by textbook definitions but must be understood in the context in which decisions are made.

In this context, the Barita transaction is not unique. It represents a broader class of financial decisions in which firms must manage currency exposure, liquidity risk, and earnings volatility under uncertainty and constraints. The central insight is that: **What appears as directional positioning in one context may represent constrained risk management in another.**

References

Academic and Theoretical Sources

Hull, J. C. (2018). *Options, futures, and other derivatives* (10th ed.). Pearson.

Madura, J. (2021). *International financial management* (14th ed.). Cengage Learning.

Smith, C. W., & Stulz, R. M. (1985). The determinants of firms' hedging policies. *Journal of Financial and Quantitative Analysis*, 20(4), 391–405.

Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25(2), 383–417.

Knight, F. H. (1921). *Risk, uncertainty and profit*. Houghton Mifflin.

Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323–329.

Institutional and Market Structure Sources

Bank for International Settlements (BIS). (2022). *Triennial central bank survey of foreign exchange and over-the-counter derivatives markets*. BIS.

Bank of Jamaica. (2020). *Foreign exchange market summary and weighted average selling rate (WASR)*. <https://boj.org.jm>

Financial Services Commission (Jamaica). (2020). *Securities dealer regulatory framework*. <https://www.fscjamaica.org>

Case-Specific and Regional Sources

Rose, D. (2020, November 21). Barita scales new heights in 2020. *Jamaica Observer*. <https://www.jamaicaobserver.com>

Rose, D. (2021, November 20). Financial derivatives in Jamaica. *Jamaica Observer*. <https://www.jamaicaobserver.com>

Jamaica Observer. (2020, September 22). Barita completes \$13.5-billion raise in additional equity despite COVID-19. *Jamaica Observer*. <https://www.jamaicaobserver.com>

Jamaica Gleaner. (2020, August 16). Barita coming to market with APO. *Jamaica Gleaner*. <https://jamaica-gleaner.com>

Wilson, A. (2021). How Barita turned money into wealth. *Trinidad Express*.
<https://trinidadexpress.com>

Company and Financial Statement Sources

Barita Investments Limited. (2020). *Annual report 2020*. <https://www.barita.com>

Barita Investments Limited. (2020). *Quarterly report (June 30, 2020)*.

Barita Investments Limited. (2020). *Additional Public Offering (APO) prospectus*.

Cornerstone Financial Holdings Limited. (2020). *Corporate disclosures and filings*.

Exchange Rate Data Sources

Exchange-Rates.org. (2020). *USD to JMD exchange rate history (2019–2020)*.
<https://www.exchange-rates.org>

Bank of Jamaica. (2020). *Weighted average selling rate (WASR)*.

Hedging, Positioning, or Both?

Barita Investments and a US\$63 Million Non-Deliverable Forward

“It is better to be roughly right than precisely wrong.”

John Maynard Keynes, *A Tract on Monetary Reform* (1923)

Introduction

It was a weekend in late November 2020, but Barita Investment Limited’s (BIL) senior management team entered the meeting room at their head office to begin their preparation for the board presentation on Monday morning. The agenda was not to defend a sizeable loss, but to examine the implications of a significant gain.

Barita Investments Limited (BIL) (see Appendix F), one of Jamaica’s leading non-bank financial institutions, had entered into a non-deliverable forward¹ (NDF) contract with its majority shareholder (77%), Cornerstone Financial Holdings Limited (CFHL) (see Appendix F), to sell USD 63 million. The contract was executed on August 24, 2020, when the spot exchange rate of J\$153.13 per USD, with settlement scheduled for October 1, 2020. At maturity, the Jamaican dollar had appreciated to J\$147.24 per USD, generating a material gain of approximately J\$720 million for BIL, approximately 26% of their annual net profit. Given this scale, the transaction drew closer scrutiny.

The transaction was lawful, properly documented, and executed within Jamaica’s evolving foreign-exchange framework. However, its magnitude, given the relatively small and

¹ An NDF is a contract to buy or sell foreign currency in the future. It does not involve payment of a notional sum; it is cash-settled based on the difference between the agreed forward rate and the prevailing spot rate at maturity.

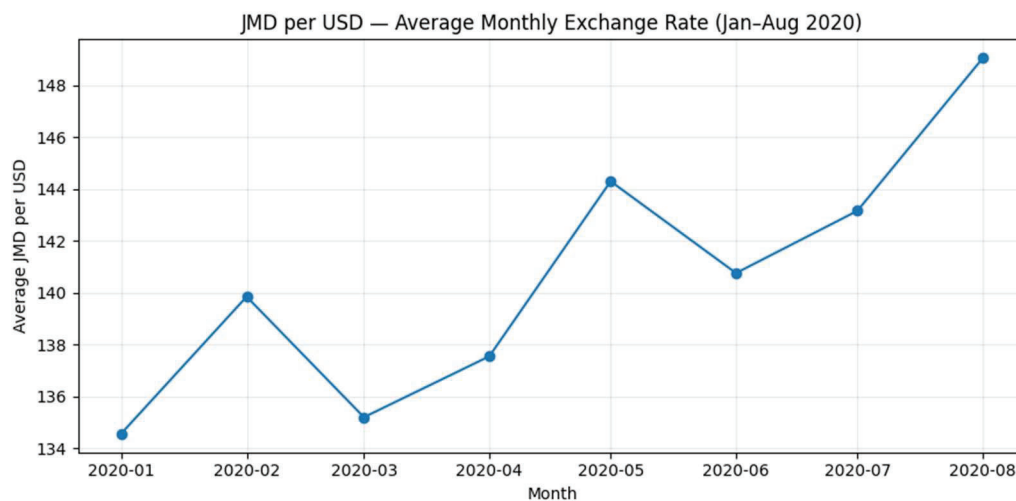
This case was prepared by Vennecia Christian Barnes as part of the requirements for the Doctor of Professional Practice of Global Leadership and Management at the Thunderbird School of Global Management. It is intended for classroom discussion only and not to indicate effective or ineffective management.

thin FX market, raised questions among multiple stakeholders, including BIL's board, the investing public, and market commentators, that extended beyond the mechanics of finance. One such question was: When does risk management become positioning?

A Year of Volatility

In early 2020, the COVID-19 pandemic significantly impacted global economies. By mid-2020, Jamaica's foreign-exchange market was unsettled (see Exhibit 1). The pandemic disrupted tourism, remittance flows fluctuated, and global capital markets reacted sharply to uncertainty. The Jamaican dollar had depreciated earlier in the year, and volatility had increased noticeably.

Exhibit 1



Source (primary): Exchange-Rates.org

Such volatility introduced uncertainty around exchange-rate expectations, forward pricing, and the reliability of recent trading ranges as a basis for risk structuring. In its June 30, 2020, quarterly report, Barita had acknowledged this environment directly:

“The currency traded between a fairly wide range of \$12.67 during the period which was characterised by increased volatility brought on by the pandemic.”

Management had described their strategy in the same report as “tactically positioning the Group’s Balance Sheet to safeguard shareholders’ equity against the effects of currency risk” (see Appendix C).

The Non-Deliverable Forward and the Additional Public Offering

Consistent with its currency risk management strategy, on August 24, 2020, Barita entered into a non-deliverable forward (NDF) contract with a notional value of US\$63 million, with settlement scheduled for October 1, 2020. At the time of execution, the spot exchange rate was approximately J\$153.13 per US dollar, and the contract was structured as a cash-settled NDF, meaning that no principal would change hands; only the difference between the contracted forward rate and the settlement spot would.

Two days after executing the NDF, Barita opened a significant Additional Public Offering (APO). The APO proceeds were intended to expand Barita’s balance sheet, scale its investment and underwriting activities, diversify its product offerings, invest in technology, and support geographic expansion, while increasing its capacity to deploy capital into higher-yielding investment opportunities.

The capital raise, which closed on September 16, 2020, generated approximately J\$13.5 billion (roughly US\$88 million at prevailing exchange rates) and was oversubscribed. When the NDF was signed, the APO proceeds were not yet in hand. By the time the NDF settled on October 1, 2020, the capital had been received, and net USD had increased relative to prior periods (see Exhibits 2, 3, and 4). This sequencing meant the derivative was structured prior to the capital inflow but settled after the balance sheet had expanded.

Exhibit 2.

BIL's Currency Risk (USD Holdings Only) Extracted from Financial Report Notes		
	2019	2020
JMD Equivalent of USD Assets	\$ 9,282,149,000.00	\$ 20,400,215,000.00
JMD Equivalent of USD Liabilities	\$ (6,948,801,000.00)	\$ (12,250,820,000.00)
JMD Equivalent of Net Exposure	\$ 2,333,348,000.00	\$ 8,149,395,000.00
Exchange Rate/USD September 30	\$ 133.52	\$ 139.97
USD Equivalent of Net Exposure	\$ 17,475,644.10	\$ 58,222,440.52

The NDF referenced US\$63 million. Whether this represented a close hedge of net exposure or an overlaid position depended on how exposure was defined, as static at execution or as evolving over the life of the contract.

The Settlement

On October 1, 2020, the USD/JMD spot rate stood at approximately J\$147.24 per USD. The Jamaican dollar had appreciated relative to its level at the time of execution, and exchange rate movements of similar magnitude (exceeding J\$12) had been observed earlier in the year. Under the NDF's cash-settlement structure, the difference between the contracted forward rate and the settlement spot was multiplied by the US\$63 million notional and paid in Jamaican dollars. The result was a gain of approximately J\$719.98 million.

Market Reaction and Stakeholder Context

The market and other stakeholders focused on the gain, which represented roughly 26% of annual net profit (approximately J\$2.73 billion) (see Appendix A), and the significant balance-sheet expansion (see Appendix B). The firm had increased total assets to approximately J\$70.5 billion and completed an oversubscribed J\$13.5 billion Additional Public Offering (APO) during the same period.

Subsequent reporting referenced the NDF more directly. The *Jamaica Observer* noted that the appreciation of the Jamaican dollar from J\$153.13 per USD to J\$147.24 per

USD generated the gain, while also emphasizing that an equivalent adverse movement would have produced a comparable loss. In this sense, the outcome reflected not only direction, but scale.

Commentary from outside Jamaica introduced a more questioning tone. Writing in the *Trinidad Express*, Anthony Wilson highlighted Barita's performance during the pandemic, noting that investment and trading gains accounted for approximately 27% of net operating revenues, and asked how such "stratospheric performance" was achieved in a period when many regional institutions experienced earnings pressure.

These observations framed the transaction through multiple lenses. The gain could be viewed as consistent with active balance-sheet management during a period in which the exchange rate had already moved within a J\$12+ intra-year range. Alternatively, the magnitude of the outcome relative to earnings, combined with the size of the position relative to net USD exposure ($\approx$ US\$63 million vs $\approx$ US\$58 million), drew attention to the relationship between exchange rate movements and reported performance.

In a relatively small and thin foreign-exchange market, such outcomes were more visible. The question facing management and the board was therefore not only how the transaction worked, but how its scale, timing, and contribution to earnings should be interpreted within the firm's stated approach to managing foreign-exchange exposure.

The Meeting

As they finalized their presentation, the management team moved beyond assembling facts to constructing a defensible narrative. They would need to articulate not only what the NDF was, but why it had been structured as it was. This meant clearly explaining the mechanics of the contract, deriving and defending the implied forward rate and its embedded break-even threshold, and situating the position within the firm's evolving balance sheet, before and after the APO. They would test the robustness of their rationale through adverse scenario modeling, demonstrating how the position would have performed under less

favorable currency movements. Equally important, they would anchor their analysis in the broader context of pandemic-driven volatility, where exchange-rate uncertainty was not hypothetical but observable. The numbers were clear. The gain was real. What remained uncertain was not the outcome, but its interpretation and the principles that should govern decisions of this scale going forward. As the team revisited the analysis, the discussion shifted from performance to intent. Had the NDF been a measured response to identifiable foreign-exchange exposure, a strategic position taken within a volatile market environment, or both? The structure, timing of the APO, and magnitude of the outcome suggested a more complex relationship between structure, timing, and outcome.

The board would evaluate judgment, discipline, and alignment with risk appetite. In a market where volatility was observable and outcomes could swing materially, the distinction between managing risk and assuming it was not always clear-cut. As the team prepared to defend their rationale, one question remained at the center of it all: When does risk management become positioning?

Exhibit 3. BIL's Currency Risk (All Currencies) Extracted from Annual Report Notes 2019

5. FINANCIAL RISK MANAGEMENT (CONT'D):

(c) Market risk (cont'd)

(i) Currency risk (cont'd)

	The Company				
	CAD	US\$	GBP	Jamaican	Total
	J\$'000	J\$'000	J\$'000	J\$'000	J\$'000
	2019				
Financial Assets					
Cash and bank balances	2,778	366,168	5,331	278,277	652,554
Securities purchased under resale agreements	-	3,130,683	-	11,548,291	14,678,974
Marketable securities and pledged assets	-	5,785,298	80,754	15,611,120	21,477,172
Receivables	-	-	-	734,215	734,215
Loans receivables	-	-	-	751,846	751,846
Due from related parties	-	-	-	1,546,670	1,546,670
Total financial assets	<u>2,778</u>	<u>9,282,149</u>	<u>86,085</u>	<u>30,470,419</u>	<u>39,841,431</u>
Financial Liabilities					
Bank overdraft	-	53,309	-	18,510	71,819
Securities sold under repurchase agreement	-	6,895,492	71,162	17,136,940	24,103,594
Payables	-	-	-	1,674,653	1,674,653
Due to related parties	-	-	-	17,572	17,572
Total financial liabilities	<u>-</u>	<u>6,948,801</u>	<u>71,162</u>	<u>18,847,675</u>	<u>25,867,638</u>
Net financial position	<u>2,778</u>	<u>2,333,348</u>	<u>14,923</u>	<u>11,622,744</u>	<u>13,973,793</u>

Exhibit 4. BIL's Currency Risk (All Currencies) Extracted from Annual Report Notes 2020

FINANCIAL RISK MANAGEMENT (CONT'D):

(c) **Market risk (cont'd)**

(i) **Currency risk (cont'd)**

	The Company				
	CAD	US\$	GBP	Jamaican	Total
	J\$'000	J\$'000	J\$'000	J\$'000	J\$'000
	2020				
Financial Assets					
Cash and bank balances	834	2,481,762	3,642	2,692,775	5,179,013
Securities purchased under resale agreements	-	1,520,926	-	6,518,677	8,039,603
Marketable securities and pledged assets	-	15,373,922	39,729	33,771,803	49,185,454
Receivables	-	1,023,605	-	1,945,882	2,969,487
Loans receivables	-	-	-	1,717,229	1,717,229
Due from related parties	-	-	-	1,729,171	1,729,171
Total financial assets	<u>834</u>	<u>20,400,215</u>	<u>43,371</u>	<u>48,375,537</u>	<u>68,819,957</u>
Financial Liabilities					
Bank overdraft	-	-	-	8,720	8,720
Securities sold under repurchase agreement	-	11,513,117	-	23,027,863	34,540,980
Short term loans	-	30,847	-	581,100	611,947
Payables	-	635,435	-	6,485,269	7,120,704
Due to related parties	-	-	-	397,308	397,308
Lease liability	-	71,421	-	210,877	282,298
Total financial liabilities	<u>-</u>	<u>12,250,820</u>	<u>-</u>	<u>30,711,137</u>	<u>42,961,957</u>
Net financial position	<u>834</u>	<u>8,149,395</u>	<u>43,371</u>	<u>17,664,400</u>	<u>28,858,000</u>

Appendix A: Barita Investment Ltd.'s Profit & Loss - year ended September 30, 2020

BARITA INVESTMENTS LIMITED

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

YEAR ENDED 30 SEPTEMBER 2020

	<u>Note</u>	<u>2020</u> <u>\$'000</u>	<u>2019</u> <u>\$'000</u>
Net interest income		882,589	650,999
Fees and commission income		1,827,376	693,273
Dividend income		8,677	30,670
Foreign exchange trading and translation gains		978,451	353,503
Gain on sale of investments		1,412,958	1,873,298
Other		<u>103,918</u>	<u>378,031</u>
Net operating revenue		<u>5,213,969</u>	<u>3,979,774</u>
Operating Expenses			
Staff costs	7	(846,090)	(553,550)
Administration costs		(1,151,116)	(896,738)
Impairment of financial assets		<u>(110,794)</u>	<u>(75,162)</u>
	8	<u>(2,108,000)</u>	<u>(1,525,450)</u>
Profit before Taxation		3,105,969	2,454,324
Taxation	9	<u>(347,440)</u>	<u>(741,543)</u>
PROFIT FOR THE YEAR	10	<u>2,758,529</u>	<u>1,712,781</u>
OTHER COMPREHENSIVE INCOME:			
<i>Items that may subsequently be reclassified to profit or loss</i>			
Realised gains on securities at FVOCI	9	521,028	600,202
ECL adjustment on securities FVOCI	9	4,226	81,743
Unrealised losses on securities at FVOCI	9	(1,096,347)	(470,267)
Fair value gain on property, plant and equipment, net of taxes	9	<u>-</u>	<u>18,333</u>
Total other comprehensive income		<u>(571,093)</u>	<u>230,011</u>
TOTAL COMPREHENSIVE INCOME		<u>2,187,436</u>	<u>1,942,792</u>
BASIC EARNINGS PER SHARE	16	<u>\$3.33</u>	<u>\$2.42</u>

Appendix B: Barita Investment Ltd.'s Balance - year ended September 30, 2020

BARITA INVESTMENTS LIMITED
CONSOLIDATED STATEMENT OF FINANCIAL POSITION
30 SEPTEMBER 2020

	<u>Note</u>	<u>2020</u> <u>\$'000</u>	<u>2019</u> <u>\$'000</u>
ASSETS			
Cash and bank balances	11	5,277,608	787,920
Securities purchased under resale agreements	12	8,039,603	14,678,974
Investment securities	13	13,939,095	11,042,562
Pledged assets	14	35,425,728	10,928,445
Receivables	15	2,986,408	748,517
Loans receivable		1,717,229	751,846
Taxation recoverable		183,299	-
Due from related parties	17(b)	1,979,035	1,624,584
Property, plant and equipment	18	609,821	353,275
Intangible assets	19	18,399	33,531
Investment	20	55,000	55,000
Investment property	21	203,400	-
Right-of-use assets	22(a)	256,588	-
Total assets		<u>70,691,213</u>	<u>41,004,654</u>
LIABILITIES AND STOCKHOLDERS' EQUITY			
LIABILITIES:			
Bank overdraft	11	8,720	71,819
Short term loans	23	611,947	-
Securities sold under repurchase agreements		34,446,619	24,092,810
Payables	24	6,970,314	1,739,686
Due to related parties	17(b)	273,744	77,711
Taxation		-	730,500
Deferred tax liabilities	25	616,891	622,850
Lease liability	22(b)	282,298	-
Total liabilities		<u>43,210,533</u>	<u>27,335,376</u>
Stockholders' Equity:			
Share capital	26	24,146,554	10,699,381
Capital reserve	27	111,466	111,466
Fair value reserve	28	25,054	685,248
Capital redemption reserve	29	220,127	220,127
Retained earnings		<u>2,977,479</u>	<u>1,953,056</u>
Total stockholders' equity		<u>27,480,680</u>	<u>13,669,278</u>
Total liabilities and stockholders' equity		<u>70,691,213</u>	<u>41,004,654</u>

Approved for issue by the Board of Directors on 17 December 2020 and signed on its behalf by:

Paul Simpson Deputy Chairman

Carl D. Domville Director

Appendix C: Excerpt from Q3 report ending June 30, 2020

“FX Translation Gains: We continued during the period to tactically position the Group's Balance Sheet to safeguard shareholders' equity against the effects of currency risk. Our local currency depreciated by \$4.62 or 3.4% against the United States dollar ("US\$") to close 9M FY 2020 at \$140.01 as per the Bank of Jamaica ("BOJ") Weighted Average Selling Rate. The currency traded between a fairly wide range of \$12.67 during the period which was characterised by increased volatility brought on by the pandemic. The Group registered foreign exchange translation gains of \$263.0 million for the year-to-date period which compares favourably to the loss of \$18.3 million recorded in the corresponding period last year.”

Appendix D: Timeline of Events & Corresponding FX Rate

Date & Event	JMD/USD Spot
September 30 2019 - Financial Year End	133.52
August 24 2020 - NDF Execution	153.13
September 30 2020 - Financial Year End	139.97
October 1 2020 - NDF Settled	147.24

Appendix E: Non-Deliverable Forwards (NDFs) vs. Deliverable Forwards

Firms exposed to foreign exchange risk often use forward contracts to manage uncertainty in future exchange rates. Two common forms are deliverable forwards and non-deliverable forwards (NDFs). While economically similar, they differ in how they are settled and in their liquidity implications.

A deliverable forward is a contract to exchange a specified amount of one currency for another at a predetermined rate on a future date. At maturity, both currencies are physically exchanged. This structure is typically used to hedge known transactions, such as receivables or payables, and aligns closely with underlying cash flows. While the contract eliminates exchange-rate uncertainty, it may result in an opportunity cost if the market moves favorably.

An NDF, by contrast, does not involve the exchange of principal. Instead, it is cash-settled, based on the difference between the agreed forward rate and the prevailing spot rate at maturity. If the market moves adversely, the firm must make a cash payment; if it moves favorably, it receives a cash payment.

The key distinction lies in liquidity and settlement risk. A deliverable forward typically coincides with an underlying currency need, whereas an NDF may require a standalone cash payment at maturity, independent of operational cash flows. For this reason, NDFs are widely used in emerging markets, where foreign currency liquidity may be limited, and firms seek to manage exchange-rate exposure without holding or delivering foreign currency.

Both instruments lock in an exchange rate, but their structure affects how and when risk is realized.

Appendix F: Background on Barita Investments Limited and Cornerstone Financial Holdings Limited

Barita Investments Limited is a publicly listed Jamaican financial services firm, founded in 1977 and listed on the Jamaica Stock Exchange. It operates as a licensed securities dealer regulated by the Financial Services Commission (FSC) and is also a primary dealer and foreign-exchange (cambio) dealer with the Bank of Jamaica. Its core activities include stock brokerage, asset and fund management, investment banking, foreign exchange trading, and structured products, serving both institutional and retail clients.

Barita is therefore a diversified financial intermediary, comparable to an investment bank or wealth management firm, rather than a hedge fund. While it engages in trading and portfolio management activities, these are conducted within a regulated balance-sheet framework, alongside client-focused services such as underwriting, advisory, and managed funds.

Cornerstone Financial Holdings Limited (CFHL) is the majority shareholder of Barita, owning approximately 70–75% of the company. It functions as a financial holding company, with interests spanning Barita Investments and Cornerstone Trust & Merchant Bank, a deposit-taking institution regulated by the Bank of Jamaica.

Cornerstone's role is strategic rather than operational: it allocates capital across its financial subsidiaries, pursues acquisitions, and oversees group-wide expansion. It does not operate as a hedge fund; instead, it resembles a financial conglomerate structure, similar to other Caribbean financial groups that combine securities dealers, asset managers, and banking entities under a single holding company.