

ZIMBABWE HYPERINFLATION

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INTRODUCTION

Zimbabwe, formerly Rhodesia, is a landlocked country in the southeast region of the African continent. The nation-state's largest industries are agriculture and mining, and in 1999, when President Robert Mugabe began a series of land reforms for farmland, inflation began to skyrocket. Zimbabwe is the first country in the 21st century to suffer from hyperinflation and has the second-worst rates in recorded history.



WHY?

As a result of British colonial rule, there remained a small White minority in Zimbabwe. When the ZANU party, supported by the USSR, and the ZAPU party, supported by Mao, gained political control of the country, Robert Mugabe of ZAPU began to enact a series of reforms. The proposed landform took the white farmers off the land and redistributed them to families that do **not** know how to farm thus taking out one of its two biggest sectors. With production low and demand for food up, prices skyrocketed and Zimbabwean currency lost its value.



HYPERINFLATION

At the peak of hyperinflation in Zimbabwe, the year-over-year inflation rate was about 90 sextillion percent (87,700,000,000,000,000,000.00); every 24.7 hours, prices doubled. In February 2009, the Zimbabwean currency was abandoned when its exchange rate reached Z\$35 quadrillion to 1 USD

TABLE 1
ZIMBABWE'S HYPERINFLATION

Date	Month-over-month inflation rate (%)	Year-over-year inflation rate (%)
March 2007	50.54	2,200.20
April 2007	100.70	3,713.90
May 2007	55.40	4,530.00
June 2007	86.20	7,251.10
July 2007	31.60	7,634.80
August 2007	11.80	6,592.80
September 2007	38.70	7,982.10
October 2007	135.62	14,840.65
November 2007	131.42	26,470.78
December 2007	240.06	66,212.30
January 2008	120.83	100,580.16
February 2008	125.86	164,900.29
March 2008	281.29	417,823.13
April 2008	212.54	650,599.00
May 2008	433.40	2,233,713.43
June 2008	839.30	11,269,758.90
July 2008	2,600.24	231,150,888.87
August 2008	3,190.00	9,690,000,000.00
September 2008	12,400.00	471,000,000,000.00
October 2008	690,000,000.00	3,840,000,000,000,000,000.00
14 November 2008	79,600,000,000.00	89,700,000,000,000,000,000.00

TABLE 2
HIGHEST MONTHLY INFLATION RATES IN HISTORY

Country	Month with highest inflation rate	Highest monthly inflation rate	Equivalent daily inflation rate	Time required for prices to double
Hungary	July 1946	4.19 x 10 ¹⁶ %	207%	15.0 hours
Zimbabwe	Mid-November 2008	79,600,000,000%	98.0%	24.7 hours
Yugoslavia	January 1994	313,000,000%	64.6%	1.4 days
Germany	October 1923	29,500%	20.9%	3.7 days
Greece	October 1944	13,800%	17.9%	4.3 days
China	May 1949	2,178%	11.0%	6.7 days

NOTES: The authors calculated "equivalent daily inflation rate" and "time required for prices to double."

SOURCES: Hungary (Nogaro 1948); Zimbabwe (authors' calculations); Yugoslavia (Petrović, Bogetić, and Vujošević 1999); Germany (Sargent 1986); Greece (Makinen 1986); China (Chou 1963).

ZIMBABWE HYPERINFLATION CONT.

GOVERNMENT RESPONSE AND ACTIONS IN RESPONSE TO INFLATION:

2009: Abandon the domestic currency and adopt the use of foreign currencies such as the US Dollar and the South African Rand

2019:

- The RTGS Zimbabwean dollar was introduced years after and the use of other currencies was prohibited
- It debuted at \$1 USD: 2.5 ZWL but soon after plunged to about 150% inflation rate.

Now: Last recorded rate of inflation was 300% and then there was a moratorium placed

SOLUTIONS

GOVERNMENT

- Lifting US and EU sanctions on Zimbabwe in order for it to trade and grow freely
- Enacted local holidays so people can protest these sanctions
- BUT...
 - US and EU both agree that these sanctions are targeted at individuals and a number of companies and do not impact the greater Zimbabwean economy
 - The opposition party says the source of the problem is government mismanagement and corruption

FOREIGN INVST. & AID PACKAGES

- China is Zimbabwe's largest trade partner and in 2015, it canceled over \$40 million USD in debt.
- The Zimbabwean government has been considering using the yuan as legal tender because it would minimize exchange-rate losses in trade.
- Could also inject liquidity into the economy which could help stabilize the current problem
- BUT...
 - China Federal Bank declines the offer
 - President Mnangagwa was trying to secure aid packages like Chinese deal to provide \$1 billion loan to expand Zimbabwe's largest thermal power plant

DIGITAL MONEY

- Zimbabwe's population is largely unbanked and account rates floating around 20% with about 6.5 ATMs per 100,000.
- Most Zimbabweans do have cell phones. With cell service monopolies reigning, it was easy to implement something similar to online banking called ECOCASH. Now about 8 out of every 10 monetary transactions happen on a phone.
- BUT...
 - As a landlocked country, it depends heavily on hydropower which can be unreliable when there are droughts Power outages can last up 17 hours a day

SOURCES

- Today's Readings
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BASEL III

KELLY COYLE

WHAT ARE THE ACCORDS:

the Basel Accords are one mechanism the international financial community has used to **standardize** and **enhance** banking regulations since the fall of the Bretton Woods system.

BASEL III'S PURPOSE:

Basel III was the Basel Committee on Banking Supervision's (BCBS) response to the 2009 global financial crisis. BCBS aimed to fix the **root causes** of the crisis, which included banks' **lack of liquidity** and **risk-taking** behaviors.

PROBLEMS WITH PRIOR ACCORDS

- Did not account for differences in bank sizes, and the capital requirements were insufficient to cover smaller banks operational risk losses
 - The use of internal models to estimate capital requirements and project risk created room for misconduct and inadequate controls
 - Limited accountability/enforcement measures in place
 - Non-Western countries lacked representation
- Created foundation internal ratings-based approach for certain asset classes and minimum "floor" amounts for other asset classes that can use their own ratings. New standard approach for calculating operating risk that factors in current bank income and historical losses.
- created a committee which monitors timely adoption of Basel standards. Added peer review mechanisms. Banks now undergo "stress tests" once a year to ensure they have enough liquidity and capital to avoid a bank run. If banks don't meet certain minimums, dividends and bonuses at banks eliminated.
- In 2009 BSBC added more members. Currently there are 28 jurisdictions covering 90% of the world's banking assets, including emerging economies like India, Brazil, Turkey, Indonesia, South Africa.

BASEL III NEW REQUIREMENTS

MINIMUM CAPITAL REQUIREMENTS



In Basel II, banks assessed an asset's risk and set aside a percentage of the weighted risk. Now, banks need to set aside a higher minimum (between 7-8.5%)

Tier 1 common equity: 2 → 4.5%

Tier 1: 4 → 6%

Tier 2 → 2%

Additionally, banks need an added 2.5% as a capital conservation buffer.

COUNTERCYCLICAL MEASURES



This measure deals with the cyclical nature of banks balance sheets. During expansionary "boom" times, certain amounts need to be set aside. When contraction "bust" times occur, these restrictions are relaxed to ensure banks can make loans and put money into the economy.

LIQUIDITY REQUIREMENTS



Banks need to have sufficient liquidity in the case of another crisis. Two ratios were implemented: the Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR). LCR is for the short term: it requires banks to have enough highly liquid assets that can be converted to cash to meet their needs in the case of a 30-day stress period. NSFR requires banks to maintain and acquire more stable sources of funding.

The goal of Basel III is to foster greater individual bank level resilience. Doing this, however, means that banks won't make as much money. sad!

COVID Change:

While this accord initially started in 2009, the accord was finalized in 2017. Implementation dates were set for 2022, but with the global pandemic, the dates have now been pushed to 2023.

NET INCOME
—————
CAPITAL / EQUITY

= lower RoE

sources:

<https://www.investopedia.com/terms/b/basel-iii.asp>
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National Flood Insurance Program

Introduction

- ❑ Floods are the most costly and frequent natural disasters in the United States. The National Flood Insurance Program (NFIP), which has served as the country's primary source of flood insurance since it was created in 1968, provides affordable insurance to people who live in areas with the greatest risk of flooding, also known as the 100-year floodplain.
- ❑ The National Flood Insurance Act requires that when purchasing a home, borrowers whose property is within the floodplain must purchase flood insurance as a condition of receiving a federally-backed loan.



Fundamental Principle of Insurance: Risk Management

- ❑ Risk management is the struggle between the desire to be financially secure despite an inevitably unforeseeable future.
- ❑ Insurance: saving strategically in advance of a probable future—the key is knowing how much to save to ensure there is enough money to cover the costs of catastrophe.
- ❑ State funded insurance is necessary not only to promote social equity, it provides coverage where private insurers refuse, and larger numbers form more stable averages and estimates.
- ❑ The three most important factors to selling insurance: trust, price, & ease.

National Flood Insurance Program

NFIP Financials

- ❑ Historically, the NFIP has facilitated property building in flood-prone areas, insuring risky locations that the private market would not at rates that don't meet actuarial guidelines for sufficiency.
- ❑ The NFIP repeatedly collects less in premiums and surcharges than it pays out in claims, leaving the Treasury Department (taxpayers) accountable for the difference.
- ❑ The NFIP has proven fiscally unsustainable as currently structured: creating a federal program to provide insurance in which premiums are not proportionate to risk invites great economic risk.
- ❑ Repeated catastrophic claims have forced the NFIP to borrow approximately \$40 billion from the US Treasury since 2005 and remains \$20.5 billion dollars in debt to U.S. taxpayers (2020); the programs annual expected costs outweigh its expected revenues by \$1.4 billion.
- ❑ As the frequency of expensive floods grow, and interest payments spiral, so do the NFIP's losses.

Critiques of the Program

- ❑ The system encourages people to settle in high-risk areas, hiding subsidies within policy premiums, making it challenging for consumers to gauge risk levels.
- ❑ Rates are set based on average home prices within a zone, rather than the cost of individual properties, leading to cross-subsidies of rich property owners by poor ones.
- ❑ "Grandfathered" properties that are reclassified into a higher-risk zone experience artificially low rates, subsidized by other policyholders in the area, and roughly one out of five properties pays premiums too low for the risks involved in ownership.
- ❑ "Repetitive loss" properties make up around 1 percent of policies but account for 30 percent of payouts.
- ❑ The policy is geared to help people rebuild in the same location they've already been flooded in despite increasingly severe storms and sea level rise due to climate change.
- ❑ The flood zone maps used for risk assessment are outdated and inadequate.

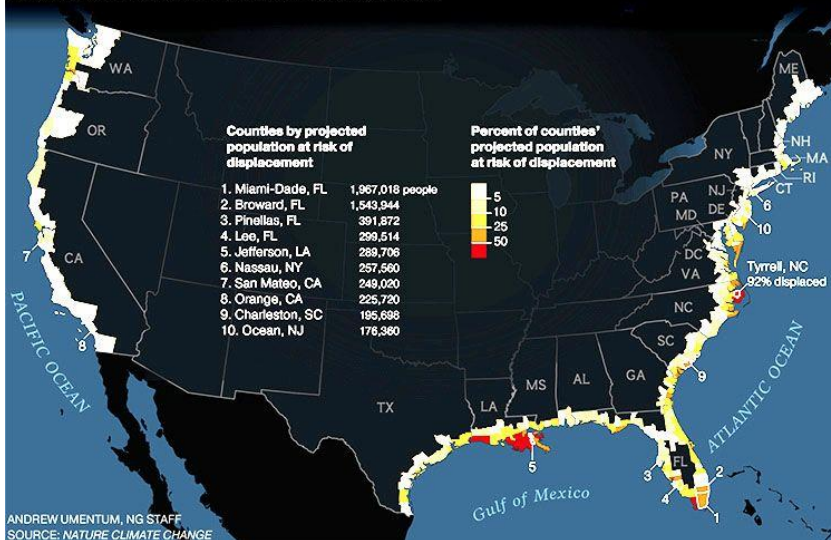
Twin Threats: Climate Change & Sea Level Rise

"Disaster Capitalism Complex"

- Ferguson describes the dysfunctional "disaster capitalism complex" which generates private profits for some, but holds taxpayers accountable for the true costs when catastrophe strikes.
- The ever-increasing welfare state stepping in when private insurers refuse results in profound fiscal risk in the case of increasingly frequent natural disasters. Taxpayers in safer parts of the country are effectively subsidizing those choosing to live in flood and hurricane-prone regions.

Counties under threat

By 2100 U.S. coastal populations are expected to face serious challenges due to a projected 5.9-foot (1.8-meter) sea-level rise.



Risks for the Program

- Global sea level projections predict levels that would put 630 million people around the globe at risk of annual flooding by the year 2100.
- A projected 60,500 homes built since 2010 will face at least 10% annual risk of severe coastal flooding by 2100.
- In the 40 years after the NFIP's creation, the population of U.S. coastal counties grew by 50.9 million with coastal counties representing 52% of the nation's total population today.

Managed Retreat

- Global warming is increasing the incidence of natural disasters. The frequency of heavy precipitation and tropical cyclone activity are increasing alongside rising sea levels which will inevitably increase the flood damage caused by storms like Katrina.
- In order to hedge this risk, policymakers debate whether to explicitly encourage the relocation of communities facing unsustainable risk to safer locations, or a managed retreat.

Proposals

A federal reinsurance program to cover catastrophes: rather than taxpayers, insurers would charge differential premiums (higher for those in high-risk zones), preventing another Katrina by reinsuring the risk through the government.

End the practice of "grandfathering," or failing to update flood insurance rates to reflect changes in projected flood risk, for any new structures that join the program and **cease covering new construction in 100-year floodplains.**

Investments in mitigation, such as support and incentivization for managed retreat, and **updated mapping** which accurately reflects the risk of development in hurricane and flood-prone areas.

Weather derivatives such as natural catastrophe bonds: allow insurance companies and others to offset the effects of extreme temperatures or natural disasters by selling the tail risk to hedge funds.

However, regional politics make these changes difficult: there are budgetary constraints to mitigation and updated maps have adverse impacts on flood prone regions' economies. NFIP policyholders resist increased rates, breaking the debate along geographic rather than party lines, with lawmakers from NFIP-heavy areas focused on rate affordability above all.