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There is no substitute for experience.

An Overview of Interest Rate Swaps

Introduction

- There are several basic elements of any bond issue:
  - stream of principal payments
  - stream of interest payments
  - options and/or rights
    - ✓ call options
    - ✓ put options
    - ✓ warrants
    - ✓ additional bonds requirements

Nature of the Basic Elements

- All interest rates include:
  - credit risk of borrower to lender
  - cost of money to lender
  - inflation expectations of both lender and borrower
- Choice of payment medium (currency) assumes that lender accepts future exchange risk or inflation risk
- Rate of debt retirement affects level of inflation risk
  - escalating debt service is repaid with “cheaper” dollars

What is a "Swap"?

- Not a debt instrument:
  - a contract to exchange payments

- Often accompanies another transaction:
  - to create variable rate debt from fixed rate debt, or vice-versa

- Bears some relevance to the companion transaction:
  - either in currency, timing or par amount

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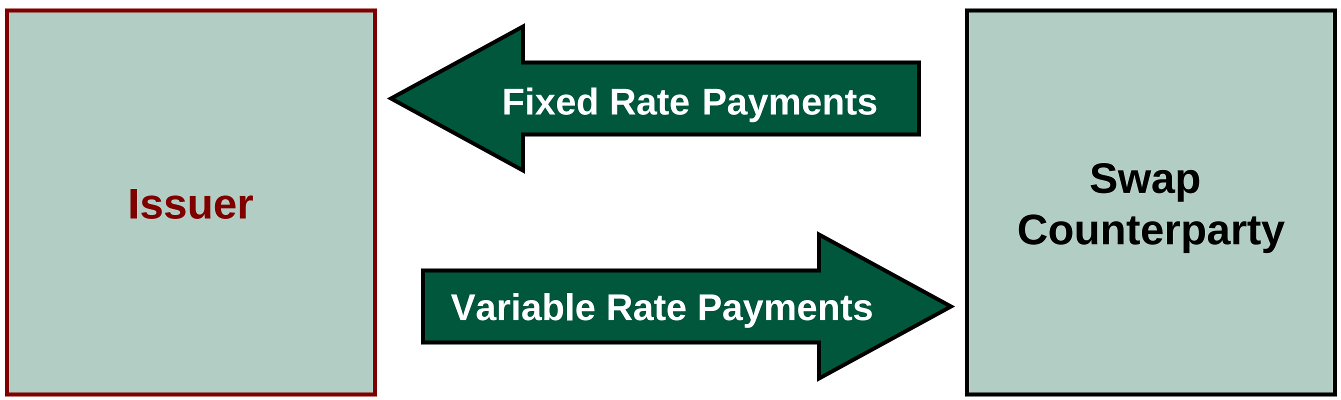
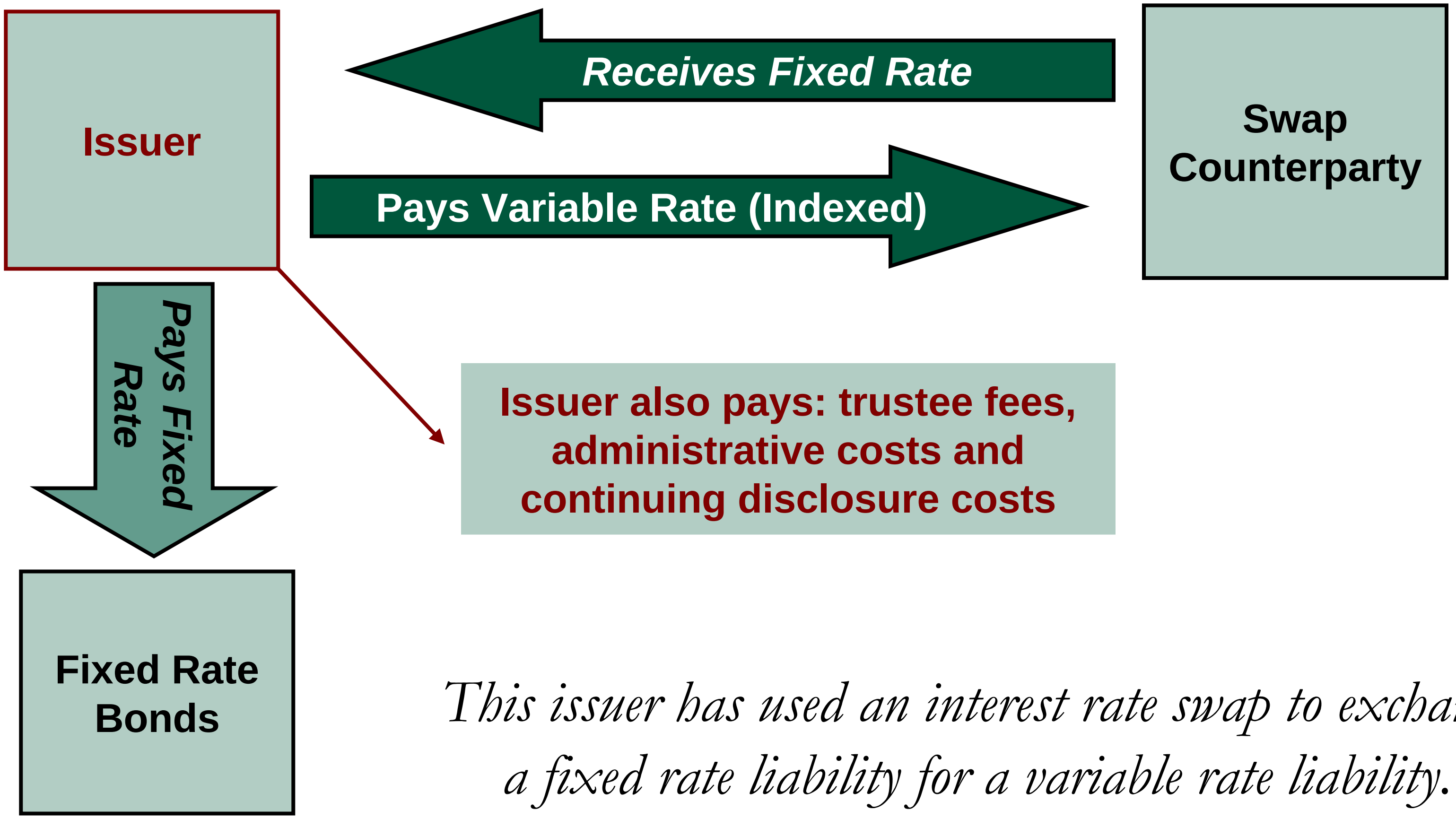
The Mechanics of a Swap



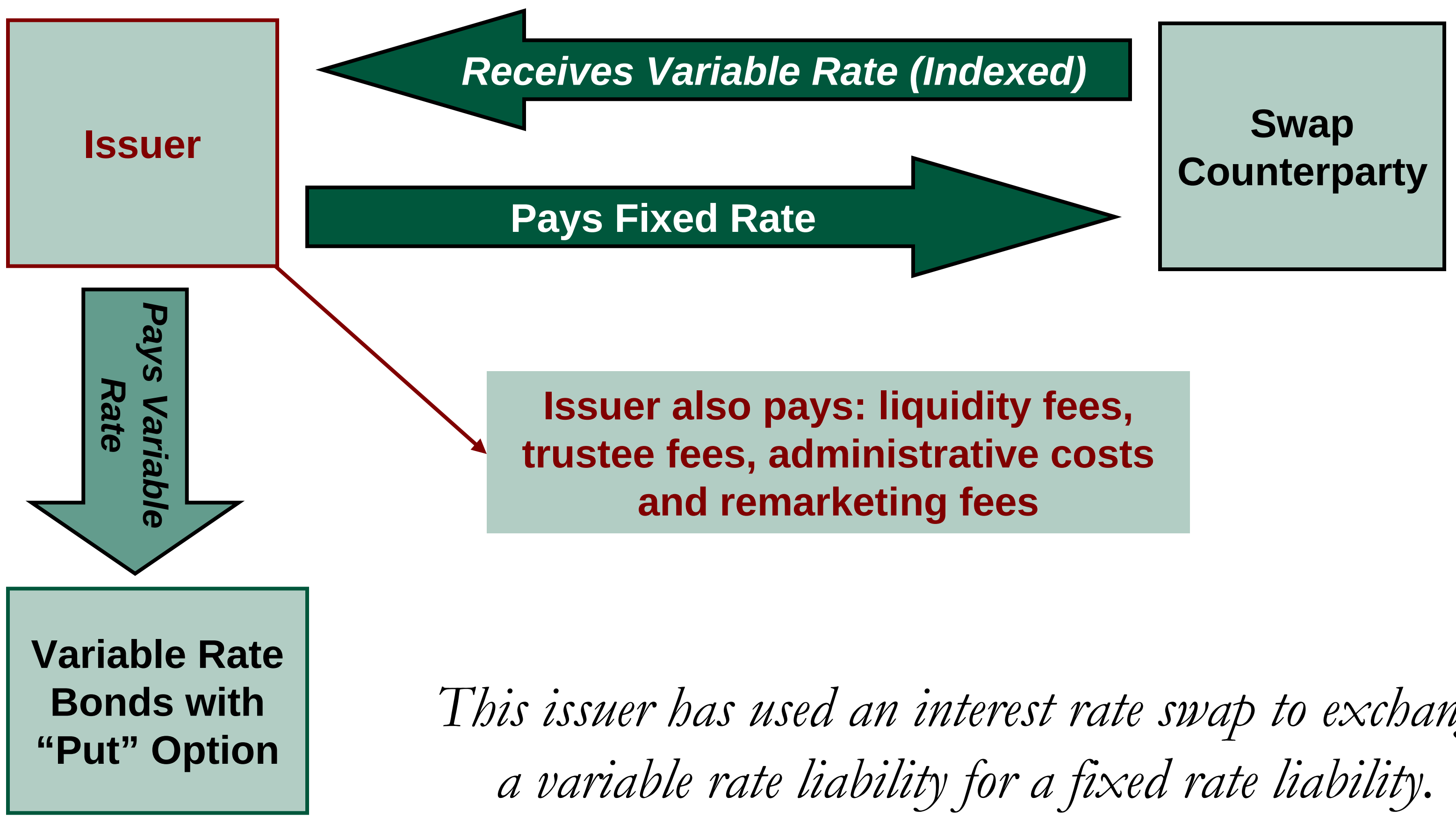
A "typical" swap diagram. This issuer has "swapped" a fixed rate obligation for a variable rate obligation.

Fixed to Floating Swap



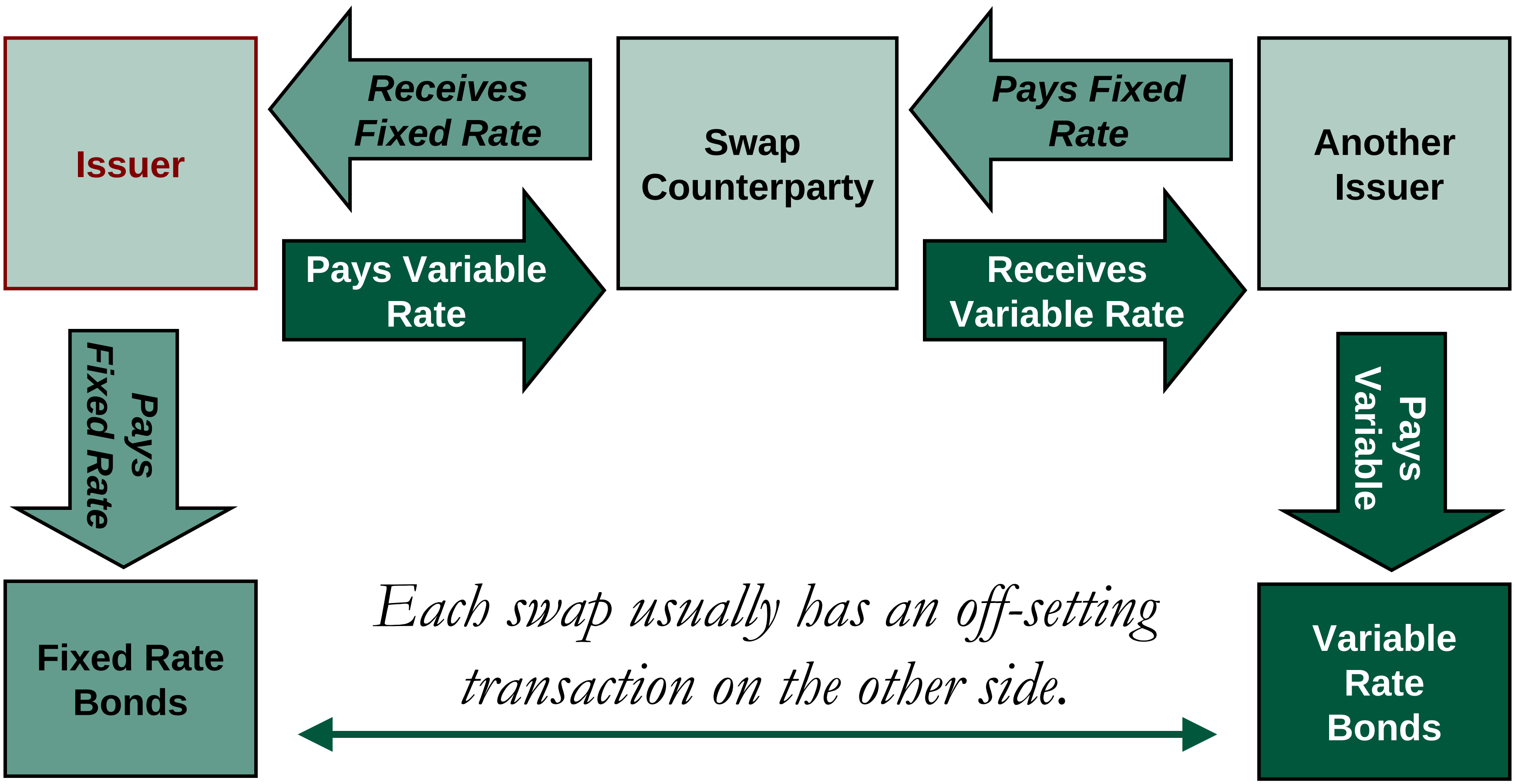
This issuer has used an interest rate swap to exchange a fixed rate liability for a variable rate liability.

Floating to Fixed Swap



This issuer has used an interest rate swap to exchange a variable rate liability for a fixed rate liability.

The "Other" Side



Why Use a Swap?

- To exploit the differences in efficiency between markets
- To manage asset/liability allocation
- To match variability (or lack of it) in revenues to the debt supported by those revenues
- To manage interest rate risk
- To diversify funding sources

Advantages

A swap can:

- reduce interest rate risk
- reduce cost
- create a "custom" design
- create a surrogate for refunding
- provide temporary funding
- diversify funding sources

Disadvantages

- A swap also poses some risks:
  - **interest rate risk** *(whether floating or fixed)*
  - **lost opportunity cost** *(better opportunity tomorrow)*
  - **mismatch to assets** *(balance sheet arbitrage +/-)*
  - **credit risk** *(counterparty cannot perform)*
  - **basis risk** *(method of calculation changes)*
  - **tax/legislative risk** *(change in law/tax produces results that were not predicted)*