Discussion of *Risk and Return in Fixed-Income Arbitrage: Nickels in Front of a Steamroller?* by Jefferson Duarte, Francis A. Longstaff, and Fan Yu

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Gameplan.

This is really quite a **nice** paper.

Consequently, I won't have much in the way of **critique**.

Instead, I intend to:

- provide a brief **review** of the key points;

- describe in a bit more **detail** one of the trading strategies;

- discuss a few possible **policy** applications of this work.

Summary.

The paper examines the risk and return characteristics of **five** fixed-income trading strategies.

These strategies are applied in swap, treasury, mortgage, corporate-bond, and fixed-income derivative markets.

The authors break down each trading strategy and **replicates** it (different time periods for each strategy).

The central idea behind each strategy is to exploit differences between **actual** and **theoretical** security values.

They **adjust** the capital to ensure that each strategy has a 10% standard deviation of excess returns.

Principal Results.

Central question: Are these high-risk strategies? That is, does the **steamroller** analogy apply?

They find most strategies generate, on average, **positive** returns.

Moreover, most strategies return distributions are **positively** skewed (with the fixed-income derivative strategy).

Large negative returns do, however, occur occasionally.

Those strategies requiring the highest **intellectual capital** for implementation appear to generate higher returns (i.e., mortgage, yield-curve, and capital structure).

A Few Comments.

There are a number of **interesting** parts to this paper.

Indeed, there's much more than I can hope do justice to in my short discussion including:

- complete **qualitative** descriptions of each trading strategy;

- a **quantitative** appendix for each trading strategy;

- detailed **summary statistics** of the risk and return characteristics of each strategy.

A bit difficult to directly compare strategies with varying analysis horizons; raises some questions about the **intellectual capital** conclusion.

Fixed-Income Arbitrage.

As we all know, this is **not** really arbitrage.

For each of the trading strategies, there are a number of **possible** variations.

They vary in **complexity** from simple (i.e., swap-spread and volatility strategies) to quite involved (i.e., yield-curve, mortgage, and capital structure strategies).

In all cases, however, the basic idea is the **same**.

One is **exploiting** differences between theoretical and actual prices.

Let's **look** at an example.

One Specific Strategy.

The **yield-curve strategy** uses a theoretical model to price individual bonds (or swaps) across the yield curve.

This permits identification of bonds whose actual prices are **rich** or **cheap** relative to their theoretical prices.

One then **buys** the cheap bond and **sells** a portfolio of (exactly priced) bonds in such a way as to **hedge** against level and slope movements in the curve structure.

It's really a bet that the bond's actual price will **converge** to its theoretical price.

One Possible Policy Implication.

Among the Bank's main tasks is the **financial-system** function.

This role actively promotes **safe**, **sound**, and **efficient** financial systems, both within Canada and internationally.

Understanding the characteristics of trading strategies undertaken by some market participants would, therefore, quite **useful**.

This paper seems to **reject** the "nickels in front of the steamroller" hypothesis.

This methodology, however, permits ongoing evaluation of **existing** and **new** trading strategies.

Another Possible Policy Implication.

Canada, like many sovereigns, **repurchases** less liquid, off-the-run government securities to permit larger gross primary issuance.

Subsequent to each bond auction we repurchase bonds of **similar tenor** in a **market-neutral** manner at **no cost** to the government.

Currently, we are **happy** with the program and have **no** plans to introduce any changes.

If **asked** to consider changes to the program, however, I think this methodology **could** be useful.