Market View
Economics and Strategy

NATIONAL BANK OF CANADA
FINANCIAL MARKETS

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One more reason to key on the jobless rate [Provi bond investors take note]

By Warren Lovely

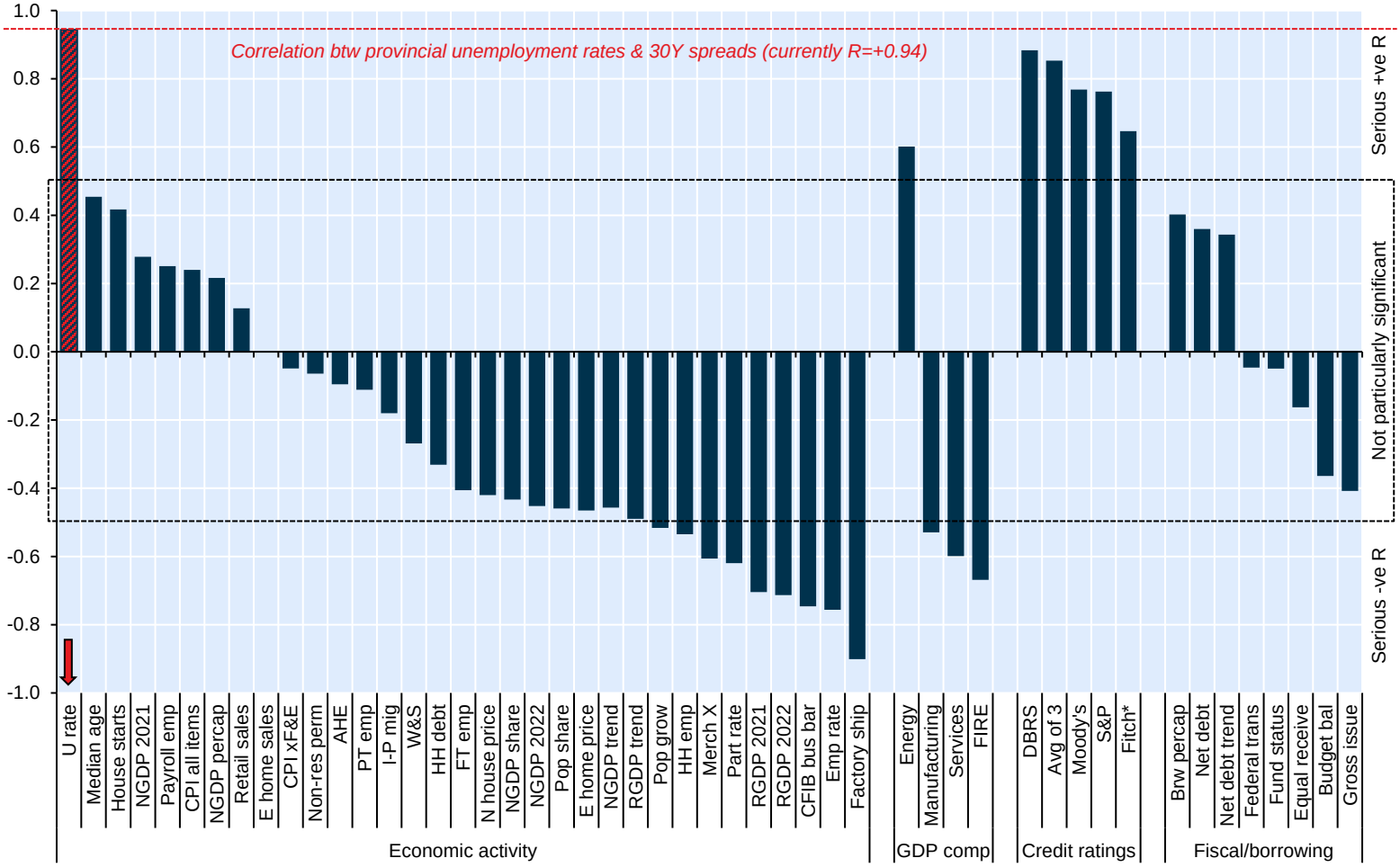
We've found ourselves focusing on the unemployment rate a fair bit lately. We're using it to gauge the true nature and inclusivity of the unfolding economic recovery, preferring it in many cases to the more esoteric 'output gap' concept. We've lobbied for the inclusion of the unemployment in the Bank of Canada's main macroeconomic forecast table, which takes pride of place in the quarterly *Monetary Policy Report*. To us, this addition makes even more sense now that the Bank has conceded its assessment of slack (and forward guidance) takes joblessness into account. We're not saying the unemployment rate is our *favourite* metric. It has limitations. And how could any self-respecting economist/strategist settle on just one measure when there's such a litany of indicators to geek out on? But the jobless rate certainly has value and utility, including in a few unexpected or less obvious places. Take provincial credit markets for instance.

Lining up C$ credit spreads for all ten provinces against a raft of economic, fiscal and credit rating variables, the single best fit is currently with the unemployment rate. Specifically, the correlation (R) between 30-year spreads and the three-month average for individual provincial unemployment rates is today +0.94. Correlation isn't limited to the unemployment rate. Other labour market indicators are useful too, just not as much. GDP growth is certainly helpful, although empirical data are infrequent and lagged, making it tougher to true-up expectations with reality. Industry shares/concentrations add value, but these are relatively static. As it stands, there's a surprisingly strong negative correlation between spreads and growth in manufacturing shipments. But if you're familiar with that particular data set, you know how choppy it is. We're keeping our distance. As one might expect, credit ratings do a pretty good job explaining the basis spread from one province to another. The trouble is, rating information tends to be limited/infrequent, in some cases amounting to a single rating report per year.

We certainly wouldn't place blind faith in the unemployment rate when trading provincials. Like everything, there's ample nuance here. More than fundamental economic performance, fiscal disclosures, rating developments and technical considerations (e.g. positioning, flows, seasonals) must be taken into account… to say nothing of broader risk sentiment. But if you're looking for a reasonably frequent, simple and easy to access proxy for provi RV purposes, spare a thought for the jobless rate. You could do a lot worse. Additional colour on page 2.

Chart 1: What variable/metric has the single best fit with provincial credit spreads? Answer: The unemployment rate!

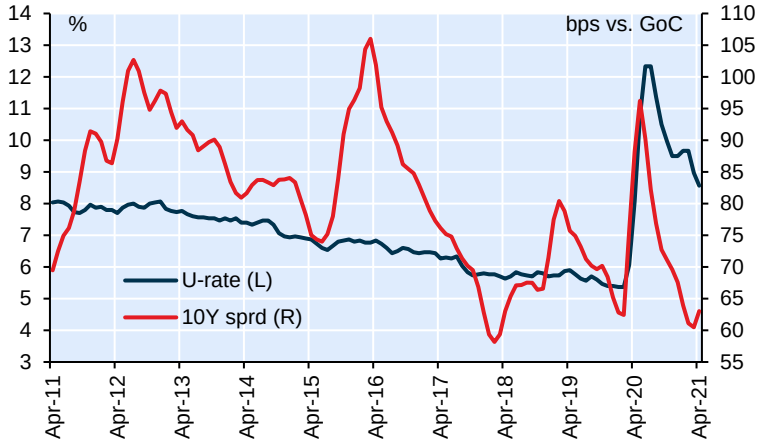
Correlation between individual provincial 30-year constant maturity credit spreads & a collection of 50 economic, fiscal, credit rating variables (13-May)



Source: NBF, StatCan, CMHC, CREA, CFIB, S&P, Moody's, DBRS, Fitch, provincial gov'ts, Bloomberg | Note: See text box on page 2 for complete listing/definition of tested variables

Chart 2: Like ratings, u-rate not great for time-series work…

Ontario unemployment rate & 10Y spread vs. GoC over time (3M mov avg)

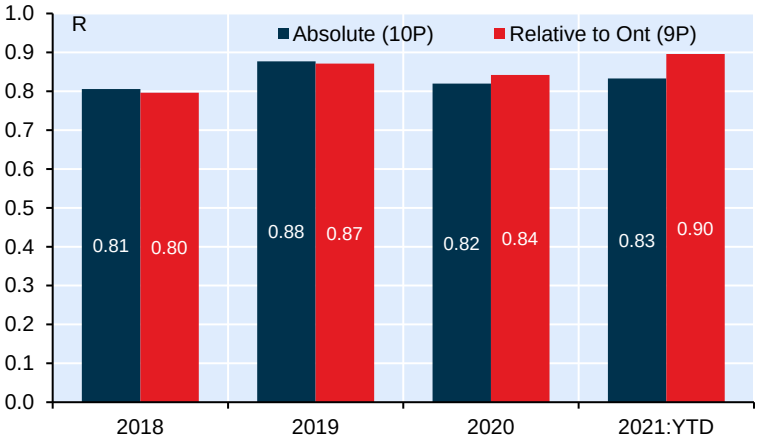


Source: NBF, StatCan | Note: 10Y is NBF generic spread vs. GoC based on observed secondary levels

If you're modeling provincial spreads over time be warned, few economic or fiscal variables have consistent bearing on the evolution of spreads. Ditto for credit ratings, which haven't much explanatory power over time. Better to key on proxies for risk sentiment in financial markets.

Chart 3: … but consistently useful for cross-sectional analysis

Correlation btw provincial unemployment rates & 30Y spreads (annual avg)

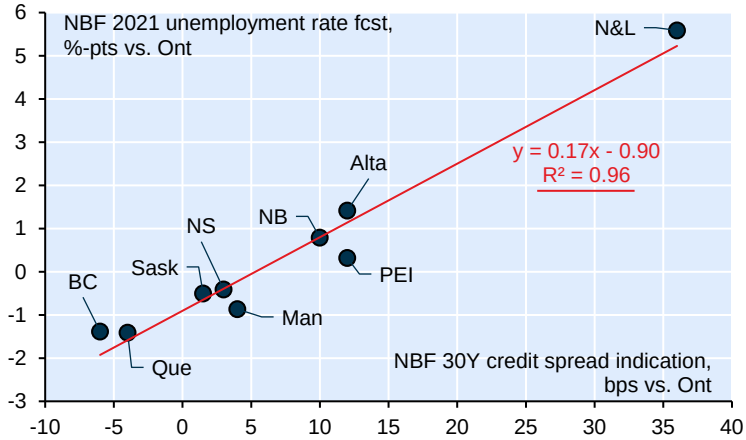


Source: NBF, StatCan | Note: Based on average of monthly unemployment rates & average of daily constant maturity spreads vs. GoC for each year; 2021 is year-to-date; 'absolute' is correlation across all 10 provs; 'relative' looks at 9 provs vs. Ont

Where unemployment rates (or credit ratings) really tend to shine is when you're lining up where one province trades vs. another. Jobless rates have been reasonably useful for valuation purposes for some time now, as evidenced by annualized correlation coefficients.

Chart 4: That's a pretty good fit, all things considered

Forecasted provincial unemployment rates vs. current provincial spreads

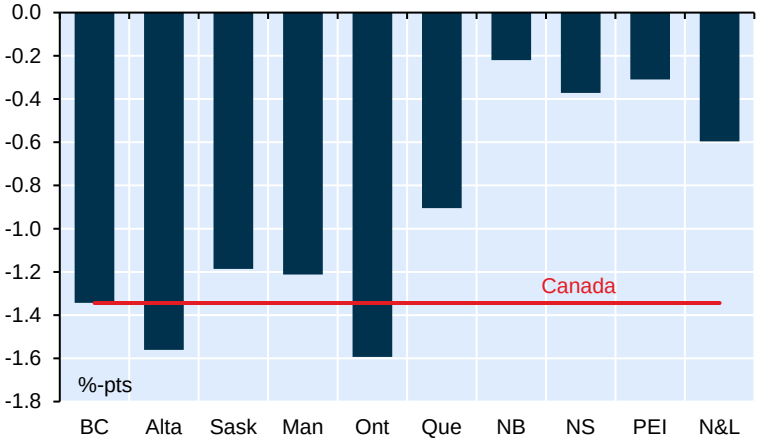


Source: NBF | Note: Unemployment rates are annual averages; spreads as at 13-May

The current relationship between relative unemployment rates and spreads is a tight one. As per Chart 1, *actual* jobless rates work very well. Believe it or not, NBF's *forecasted* unemployment rates for 2021 as a whole are even better aligned with valuations. R=+0.98 | R-squared=0.96

Chart 5: What might relative performance look like in 2022?

Change in provincial unemployment rates: 2022 vs. 2021 (NBF forecasts)



Source: NBF | Note: Based on average annual unemployment rates

If you buy the idea that relative labour market performance can/will influence valations in provi land, pay attention to the evolving outlook for unemployment rates. We see jobless rates coming down everywhere in 2022, but nowhere faster than in Ontario and Alberta. Just FYI.

Note on Chart 1, page 1 – This chart illustrates the simple correlation (R statistic) between current provincial credit spreads and 50 assorted economic, fiscal and credit rating variables. Correlations are separated into four categories and ordered from highest to lowest within each category. Perfect correlation equals +/- 1. Details on our chosen variables:

Provincial spreads (in all cases compared to other variables)=NBF 30-year constant maturity spread indication vs. GoC curve; latest observation is from 13-May-2021 | **Economic activity variables:** AHE=LFS average hourly wage rate (Y-O-Y % chg, 3M avg); CFIB bus bar=CFIB Business Barometer (index, latest month); CPI all items (Y-O-Y % chg, 3M avg); CPI xF&E=CPI excluding food and energy (Y-O-Y % chg, 3M avg); E home price=CREA existing home price (Y-O-Y % chg, 3M avg); E home sales=CREA existing home sales (Y-O-Y % chg, 3M avg); Emp rate=LFS employment rate (%, 3M avg); Factory ship=manufacturing shipments (Y-O-Y % chg, 3M avg); FT emp=LFS full-time employment (Y-O-Y % chg, 3M avg); HH debt=household debt-to-disposable income ratio (ratio, 2019); HH employment=LFS employment (Y-O-Y % chg, 3M avg); House starts=CMHC housing starts (Y-O-Y % chg, 3M avg); I-P mig=net inter-provincial migration (ratio to population, latest Q); Median age (years, latest Y); Merch X=international merchandise exports (Y-O-Y % chg, 3M avg); N house price=new house price (Y-O-Y % chg, 3M avg); NGDP 2021=NBF nominal GDP forecast for 2021 (%); NGDP 2022=NBF nominal GDP forecast for 2022 (%); NGDP per cap=nominal GDP per capita ($, 2020); NGDP share=share of national nominal GDP (%, 2020); NGDP trend=average annual growth in nominal GDP (%, 2015-19); Non-res perm=non-residential building permits (Y-O-Y % chg, 3M avg); Part rate=LFS participation rate (%, 3M avg); Payroll emp=SEPH payroll employment (Y-O-Y % chg, 3M avg); Pop grow=population growth (Y-O-Y % chg, latest Q); Pop share=share of national population (%, latest Q); PT emp=LFS part-time employment (Y-O-Y % chg, 3M avg); Retail sales (Y-O-Y % chg, 3M avg); RGDP 2021=NBF real GDP forecast for 2021 (%); RGDP 2022=NBF real GDP forecast for 2022 (%); RGDP trend=average annual growth in real GDP (%, 2015-19); U rate=LFS unemployment rate (%, 3M avg); W&S=wages and salaries (Y-O-Y % chg, latest Q) | **GDP composition variables** based on 2019 GDP by industry shares, where FIRE=finance, insurance, real estate, rental and leasing | **Credit rating variables** are linear conversions of long-term ratings into index values, where AAA=10, AA+=20, AA=30 and so on; scores are adjusted -/+ 5 for 'Positive' or 'Negative' outlooks; Avg of 3=simple average of rating scores based on S&P, Moody's and DBRS, since Fitch rates only 5 provinces (Alta, BC, Ont, Que, Sask) | **Fiscal borrowing variables:** Brw percap=gross borrowing requirement per capita ($, 2021-22); Budget bal=budgetary balance (% of GDP, 2020-21); Equal receive=dummy for Equalization-receiving province (1 or 0, 2021-22); Fund status=borrowing program status (% of req't, 2021-22); Gross issue=gross borrowing requirement ($, 2021-22); Net debt=net debt-to-nominal GDP ratio (%, 2020-21); Net debt trend=change in net debt-to-nominal GDP ratio (%-pts, 5Y to 2020-21).

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Economics and Strategy

Montreal Office
514-879-2529

Stéfane Marion
Chief Economist and Strategist
stefane.marion@nbc.ca

Matthieu Arseneau
Deputy Chief Economist
matthieu.arseneau@nbc.ca

Paul-André Pinsonnault
Senior Economist
paulandre.pinsonnault@nbc.ca

Angelo Katsoras
Geopolitical Analyst
angelo.katsoras@nbc.ca

Kyle Dahms
Economist
kyle.dahms@nbc.ca

Daren King
Economist
daren.king@nbc.ca

Jocelyn Paquet
Economist
jocelyn.paquet@nbc.ca

Alexandra Ducharme
Intern Economist
alexandra.ducharme@nbc.ca

Toronto Office
416-869-8598

Warren Lovely
Chief Rates and Public Sector Strategist
warren.lovely@nbc.ca

Taylor Schleich
Rates Strategist
taylor.Schleich@nbc.ca

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