

A Proposal to Expand the Bank of Canada's Business Outlook Survey

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Disclaimer

The views expressed in this paper are those of the author.

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Outline of Presentation

- What is the Business Outlook Survey (BOS) and how is it used?
- A brief history of the BOS
- Business Outlook Survey cycle today
- Expanding the BOS... Why now?
- A proposal to expand the BOS

The Business Outlook Survey

- The Bank of Canada's Business Outlook Survey (or BOS) provides a timely source of information about firms'...
 - Past and expected future sales growth, production
 - Investment intentions, capacity constraints
 - Employment, labour shortages, wage growth
 - Inflation expectations, input and output prices
 - Financing and credit conditions
 - Special topics
- It has been shown to provide leading signals of future activity
- It serves as a “reality check”

The Business Outlook Survey (continued)

- Every quarter, Bank of Canada regional staff engage in two-way conversations with 100 firms
 - Sample reflects the diversity of the Canadian economy by region, by type of activity, and by size of firm
- Staff conduct face-to-face interviews
 - Usually with a senior executive at the firm
- Interviews are confidential, at the firm's workplace
- Semi-structured interviews allows for the probing of responses
- Each interview: 60 minutes, 2 BoC interviewers, pen and paper
- Firms are different quarter to quarter, but we may visit firm regularly

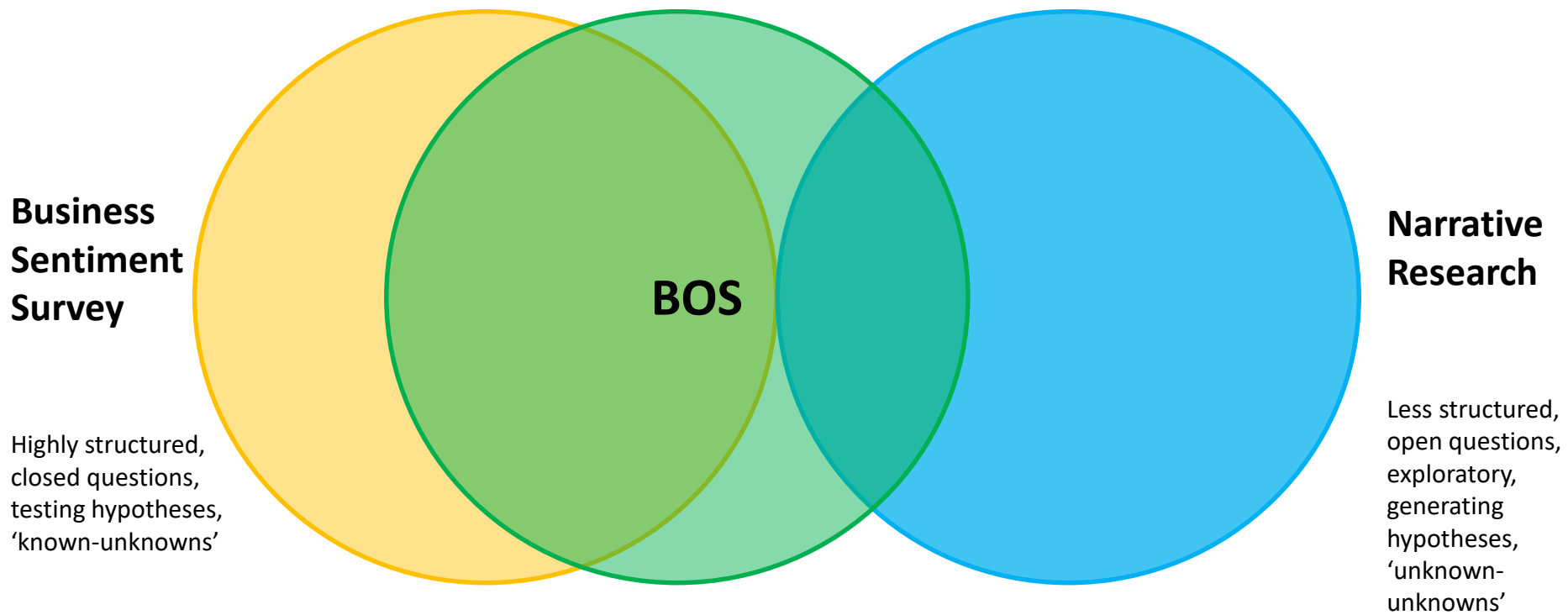
Business tendency survey and qualitative analytical tool

- The BOS is a hybrid between a traditional business tendency survey and a qualitative analytical tool
 - The aim has always been to develop useful time-series for the Bank's monitoring purposes
 - This is particularly the case in areas where traditional data is weak – sales expectations for example
 - Face-to-face visits allow the Bank to collect useful narratives from firms about their business context and to listen for emerging trends and issues that may influence the way the economy unfolds, factors impacting their outlook, and to probe into areas of concern or interest to the Bank
 - These help to identify risks and enrich the Bank's narrative on where the economy is going

In-depth, face-to-face interviews tend to be used when...

- Inherent and unknown complexities need to be explored
- Researcher-subject interaction yields deeper (and sensitive) information
- Open-ended, less structured questions are needed
- High response rate is important
- Time, budget and interviewer expertise permitting

Situating the BOS



How is the BOS used at the Bank?

- Bank staff use the BOS results, along with several other sources, to inform their judgement about the forecasts generated by the various models used in the projection production process
 - Some BOS results also serve as inputs into our models
 - BOS results provide additional evidence supporting staff estimates or suggesting possible risks to the main projection
- Business consultations are timed to feed into the decision-making process that precedes the Bank's fixed dates for 4 of the Bank's 8 monetary policy decisions (the ones accompanied by an economic outlook)

How is the BOS used at the Bank? (continued)

- The information gathered gives the Bank of Canada's Governing Council insight into what business people are seeing and planning and provides insight into the real-world stories and business decisions that underlie the official statistics
- It serves as a “reality check” on regional economic developments
 - As such, the BOS is a key element entering Governing Council deliberations about the economic scenario and monetary policy
 - The results from BOS core and special questions also contribute to the narrative supporting the economic outlook and the risks around the main scenario

The Bank of Canada opened its 5 regional offices 20 years ago this fall!!



A Brief History of the Business Outlook Survey (BOS)

- 20 years ago this fall, the Bank of Canada opened its 5 regional offices across the country to provide:
 - More effective regional input into the Bank's policy deliberations
 - Enhance communications and liaison activities
- The Business Outlook Survey, our flagship product, began as an informal quarterly set of consultations conducted by the Bank's regional offices with firms and industry associations
 - These face-to-face visits touched on demand and sales expectations, investment, hiring and wage intentions, price growth outlook, inflation, and labour shortages

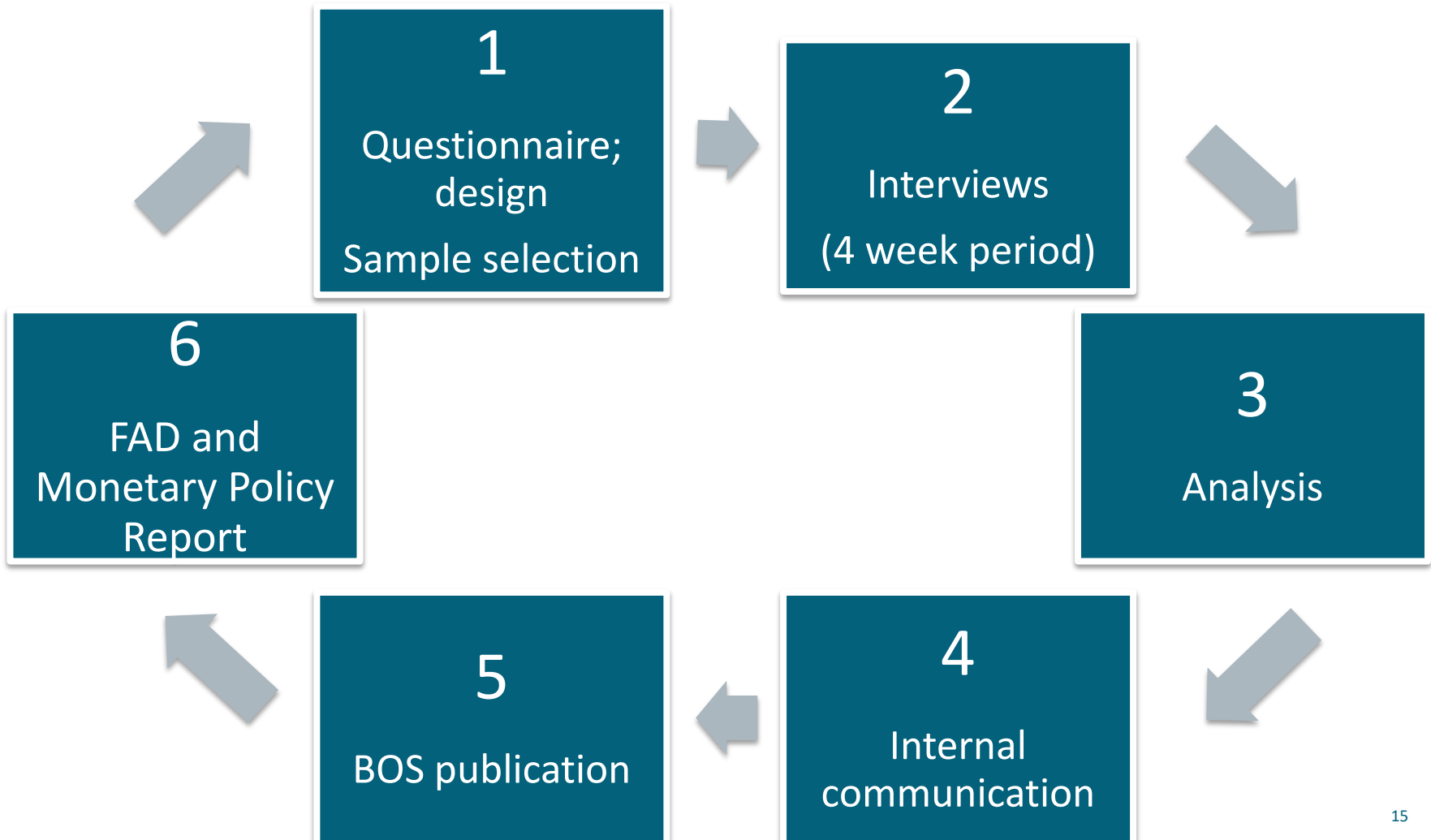
Brief History of the BOS (continued)

- By 2001, practices were standardized and new questions were added
 - Information from the consultations were circulated internally
- In the spring of 2004, the Business Outlook Survey (BOS) was published for the first time
 - It included a time series for several core questions and a short paragraph on each describing, at a high level, some of the supporting narrative shared by the firms
 - Efforts to maintain confidence in monetary policy effectiveness led to discussions around improving central bank transparency and sharing with the public the indicators the Bank's decision makers were relying on for their deliberations

Brief History of the BOS (continued)

- A handful of core questions were added to the publication over time (credit conditions, past sales, labour shortage intensity, and, most recently, indicators of future sales)
- Several ongoing probing questions are inserted in the questionnaire to support the analysis and the communication of the results
- Special questions have regularly been added for varying periods of time, spanning from one quarter to several years, to gather timely information on key economic developments and their impact on business sentiment and outlook

Typical *Business Outlook Survey* cycle



Stage 1 – Questionnaire

- Core questions are adjusted very infrequently
 - Long history: Past and future sales; investment and hiring intentions; capacity pressures (ability to meet demand, labour shortages); input and output prices; credit conditions; inflation expectations
 - Recent additions: Intensity of labour shortages; indicators of future sales
- Probing questions
 - Additional details useful for the interpretation of the results
- Special questions are added and removed regularly
 - Timely topics for monetary policy

Stage 1 – Questionnaire

- Looking for the business perspective on how the environment is changing
 - Change in “growth rate”: sales activity; input and output price expectations
 - Change in level: e.g., investment and employment intentions
- Gauging capacity pressures – goods and services, product and labour markets
 - “How would you rate your ability to meet an unexpected increase in demand?” (no, some or significant difficulty), rather than capacity utilization per se
 - Labour shortages “that restrict your ability to meet demand”?
 - Have labour shortages “generally become more or less intense”?

Stage 1 – Sample selection

- 100 private sector firms – different each quarter
- Mix of new firms and former participants
- Quota sample – not random
 - Regional and industrial mix targeted to closely correspond to share of business-sector GDP
 - Firm size also targeted: small, medium and large
 - Periodically updated for changes in industrial mix – otherwise targets fixed
- When non-response, choose another firm with similar characteristics

Stage 2 – Interviews

- Visits take place over 16 to 18 business days
- Face-to-face, key feature of this survey
 - Designed to help the Bank better understand what businesses are seeing and planning, and why
 - Carried out as a conversation using business-friendly language
 - Create a relationship and expand the Bank’s network of contacts
 - Permits additional “site visit” information to be gathered
- Meet with CEO, CFO, Treasurer, Senior VP Finance
- Confidentiality explained verbally and on questionnaire
- Always at least two interviewers: Regional director and economist

Stage 3 – Analysis

- Aggregating regional results to the national level
 - Staff from five regional offices conduct analysis, hold meetings to come to a consensus view
- Although the small and not purely random sample size raises statistical reliability issues from the lens of a traditional quantitative researcher
 - Narratives complement quantitative information
 - Analysis shows that there is no evidence that quota sampling leads to biased estimates or wider confidence intervals
 - Reasonable correlations with corresponding economic data
- Value of survey beyond what can be measured quantitatively

Stage 3 – Analysis

- Key regression-based results for BOS indicators
 - Output gap, labour input gap
 - Real GDP growth
- BOS Indicator
 - Principal component analysis (2011)
 - Summary measure of responses from all the questions published in the BOS (except inflation expectations)
 - Informative for near-term investment growth

Stage 4 – Internal communication

- Results and key themes presented to CEA staff about four weeks before the publication of the MPR
 - One of several inputs used by staff to form its judgment about the forecasts
 - May support staff numbers or suggest possible risks to the main projection

- Results and key themes presented to Governing Council (GC) about three weeks before the publication of the MPR
 - Complement to the other material into the monetary policy process
 - “Reality check” on regional economic developments

Stage 5 – BOS publication: Structure

- Headline (example from July 2016):
 - *The summer Business Outlook Survey indicates that overall business sentiment is subdued. The boost from foreign demand remains insufficient to outweigh the continued drag from commodity-related activity combined with modest domestic demand.*
- Overview
 - Key messages from the BOS
- Survey results (indicators, charts)
 - Five sections: Business activity, Pressures on production capacity, Prices and inflation, Credit condition, BOS Indicator
- Box (since 2016Q1)
 - Results of special questions on timely topics

Stage 5 – BOS publication: Interpretation of results

- Several results are presented as “balances of opinion”
 - Balance = % positive minus % negative
 - Summary statistic; same weight to those expecting large and small changes
- Example: Future sales (FS): $43\% - 38\% = 5\%$ [July 2016]
 - Means that 43% of firms expect sales growth to increase, does not mean that 43% of firms expect sales to increase
 - Means that 38% of firms expect sales to grow at a lesser rate, but it does not mean that 38% of firms expect sales to decrease
- What does a change from survey to survey mean (e.g.: FS)?
 - Strictly speaking, it means: “views that sales will grow at a greater (lesser) rate are more (less) widespread among firms surveyed”

Objectives of ‘Expanding the BOS’

- Increase our confidence in the themes that we extract from the BOS narratives, particularly at the sub-national level
- Increase our capacity to comment upon regional and sectoral trends
- Increase the statistical accuracy of quarter-to-quarter movements in each of the balances of opinion
 - Develop one or more new leading indicators of key macroeconomic variables (e.g. investment, output gap)
- Increase our capacity to monitor how businesses are responding to specific events in a timely fashion, or ongoing structural changes in the economy (sometimes with special surveys)
- Grow our base of contacts and expand Bank presence among Canadian businesses
 - Identifying and developing relationships with well informed contacts

We're guided by the Medium Term Plan (MTP)

- An important element of the MTP is to reinforce and further develop a culture that **places a high value on innovative ideas**
 - **Theme 2: Renewing ways of doing business** by strategically expanding relations and engagement with domestic partners to build economic and business intelligence
 - **Theme 3: Reinforcing a culture of innovation** by being a workplace that collaborates using the best tools and processes to find the best solutions

What's working ...

- Timely information collected regarding what businesses are experiencing and planning
- Two-way discussion of issues between firms and Bank
- Confidentiality encourages candid discussions on sensitive business issues
- We are able to corroborate evidence on economic conditions, especially at times when there is increased uncertainty about other economic indicators
- Flexible method for gathering timely information from a cross-section of regions and industries on topics of interest to the Bank

What we learned from talking to other central banks

- Spend almost all their time in the field
- Most conduct face-to-face interviews with CFO or owners
- Less scripted interview questions than BoC, more open-ended
- Probe on core set of issues (ad hoc set of issues as well)
- Deliberately spend time building up their network of relationships
- Meet more frequently with informed firms
 - If necessary, conduct telephone interviews
- Talk to firms more often than every 18 months
- Interviews are spread throughout the quarter – no fixed survey period
- After the interview, interviewer prepares a summary of the key points

Compared to other central banks our current approach...

- Places more emphasis on numerical indicators vs. stories, themes
- Less relationship-oriented (we see contacts less often)
- Involves less time in the field / smaller sample
- More “random” and less “purposive” or strategic in sample design, not necessarily achieving “saturation” by sector or region
- On par in terms of analytical approaches and use of technology (low)
- More public reporting

Some Benchmarking against Other Central Banks

	BoC	BoE	SNB	RBA	Fed. Atlanta
Number of Interviews per year	400	5000	960	950	640
Population	36M	65M	8M	24M	45M
GDP	US\$ 1,551B	US\$ 2,849B	US\$ 665B	US\$ 1,340B	US\$ 2,260B
Population per interview	1 interview per 90K population	1 interview per 13K population	1 interview per 8.3K population	1 interview per 25K population	1 interview per 70K population
GDP per interview	1 interview per US\$ 3.88B GDP	1 interview per US\$ 0.57B GDP	1 interview per US\$ 0.69B GDP	1 interview per US\$ 1.41B GDP	1 interview per US\$ 3.53B GDP

Why expand now? – Economic and institutional context

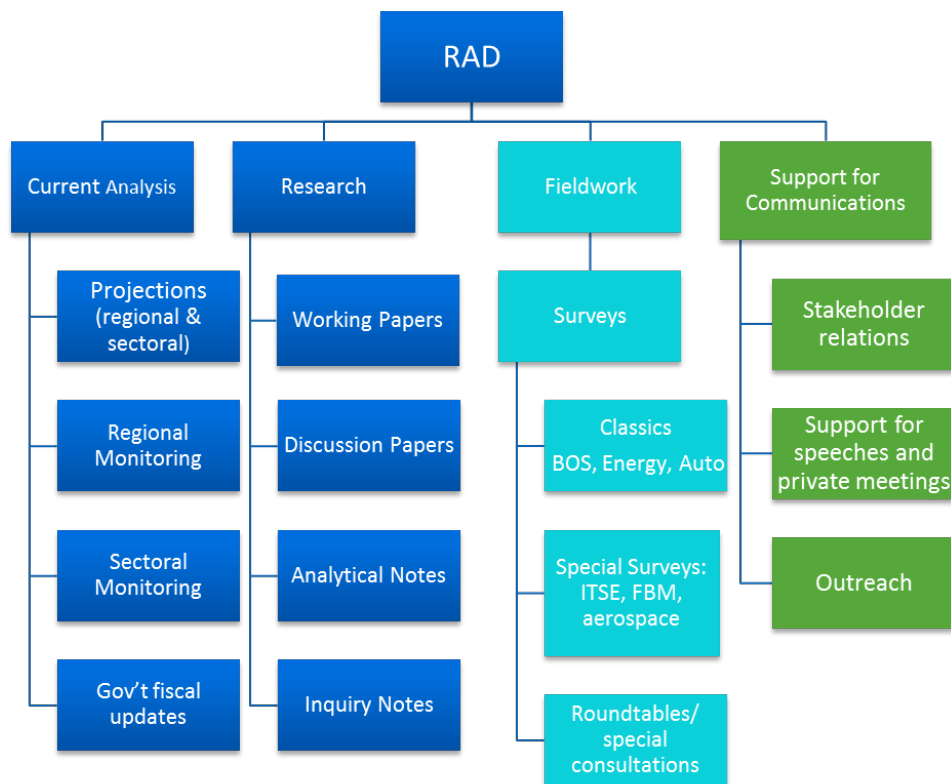
- Sectoral/regional developments continue to be important
 - Many public references at the sectoral/regional level tied to the results of the BOS; provides richer national narrative
 - Quality/quantity of RAD analysis has had to increase
- Structural changes (digitization, globalization) will continue to play out differently among industries
- Data gaps persist
- Stakeholder relations and communications outreach remain a priority
 - 2016–18 MTP: Strategically expand relations and engagement with domestic partners to build economic and business intelligence

Why expand now? – Capacity of regional division

- BOS was built 20 years ago to provide signals at the national level
 - The Bank's narrative has become more granular
 - Sample size is too small and unmatched to regional GDP shares to be confident about signals at the regional and industrial level
- Staff have responded to evolving needs by “bolting on” additional ad hoc industry consultations and conducting special surveys
- Accomplished without additional resources – Division operating at/beyond capacity

BoC Regional Analysis Division has a unique business model

- Current analysis, research, and support for communications in addition to field work, with economists integrated to Bank core functions, is a unique strength of the BoC model
- RAD has developed significant expertise in regional/sectoral issues – migration, housing, energy, autos, aerospace, etc – that benefit from and support all four functions



Resourcing

- Regional team is operating at capacity
- Other central bank regional offices focus mostly on field work
- Through efficiency gains, technology adoption and limited scale economies, RAD can double field work output by adding 4 economists (2 professional staff and 2 support staff)
 - This is the recommended option (detailed below)
 - Implementation may require hiring temporary support staff to help build up our contact base

Option 1 (recommended): Double BOS sample and conduct 2 special surveys / year

- Increase number of interviews/quarter with existing staff: Extend the survey period by 1 week; new technology
 - Some efficiency gains and scale economies anticipated
- Adjust the BOS sample to better reflect GDP shares regionally
- Additional staff: Economists focused on field work (4) , Admin (1)
 - During the BOS survey period, staff would conduct interviews
 - During the non-BOS period, new staff would conduct special surveys and industry consultations, and grow the contact base
- New and existing staff to carry out 2 special surveys each year
- Maintain current levels of non-BOS output

With a 200 sample BOS and two special surveys, what do we get?

- Increased confidence in themes extracted from the BOS
- Increased capacity to comment on (sub)regional/sectoral trends
- Increased statistical accuracy of quarter-to-quarter movements in balances of opinion
 - Develop one or more new leading indicators of key macroeconomic variables (e.g. investment, output gap)
- Increased visibility into businesses' responses to specific events in a timely fashion, ongoing structural changes in the economy and areas where data gaps exist
- Grow base of contacts; expand Bank presence among Canadian businesses
 - Identify and develop relationships with well informed contacts

Option 2: Getting to 400 – Scaling up to parity with other central banks

- Add 5 new teams (15 staff), one per regional office, specializing in field work
 - Each (3-person) team able to interview 50 to 55 firms/quarter over the 5-week period
 - Each new team made up of a Senior Rep, an Industry Research Analyst (IRA) and a Booking Admin.
 - The new team in BC also works in the PR region
 - The new team in AT also works in the ON region
- Extending survey period by 1 week/quarter together with new technology allows existing staff to increase the number of interviews conducted

Getting to 400 (Continued)

- Senior Reps and IRAs help with BOS analysis and relationship building
 - Participate in special surveys / industry consultations during non-BOS surveys periods
 - New teams meet with industry associations, attend workshops and conferences to enlarge relationship database, make cold calls to set up introductory meetings, and grow network of contacts
 - Determine if gaps exist between who's interviewed and who needs to be interviewed
- Division would expand by almost 60 percent for the 4-fold increase in field work

Implementation and Next Steps: Both options

- 2017Q3 and 2017Q4:
 - Prepare a blueprint based on the option chosen
 - Budget, resources, contracts
 - Write discussion paper draft
 - Paper would be finalized and released publicly in 2018
- Hire staff (if necessary) in Q3 and Q4 of 2018
- Expand in Q1 2019 in line with the start of the next MTP

DISCUSSION