

Fiscal Policy and Fiscal Rules in Chile, Colombia, and Peru: Evaluation and Reform Proposals

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Invited Session LACEA: Fiscal Policy in Trying Times

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Outline

1. Motivation
2. Evolution of Institutional Frameworks
3. Hypotheses, Data, and Estimation Techniques
4. Results
5. Reform Proposals

1. Motivation

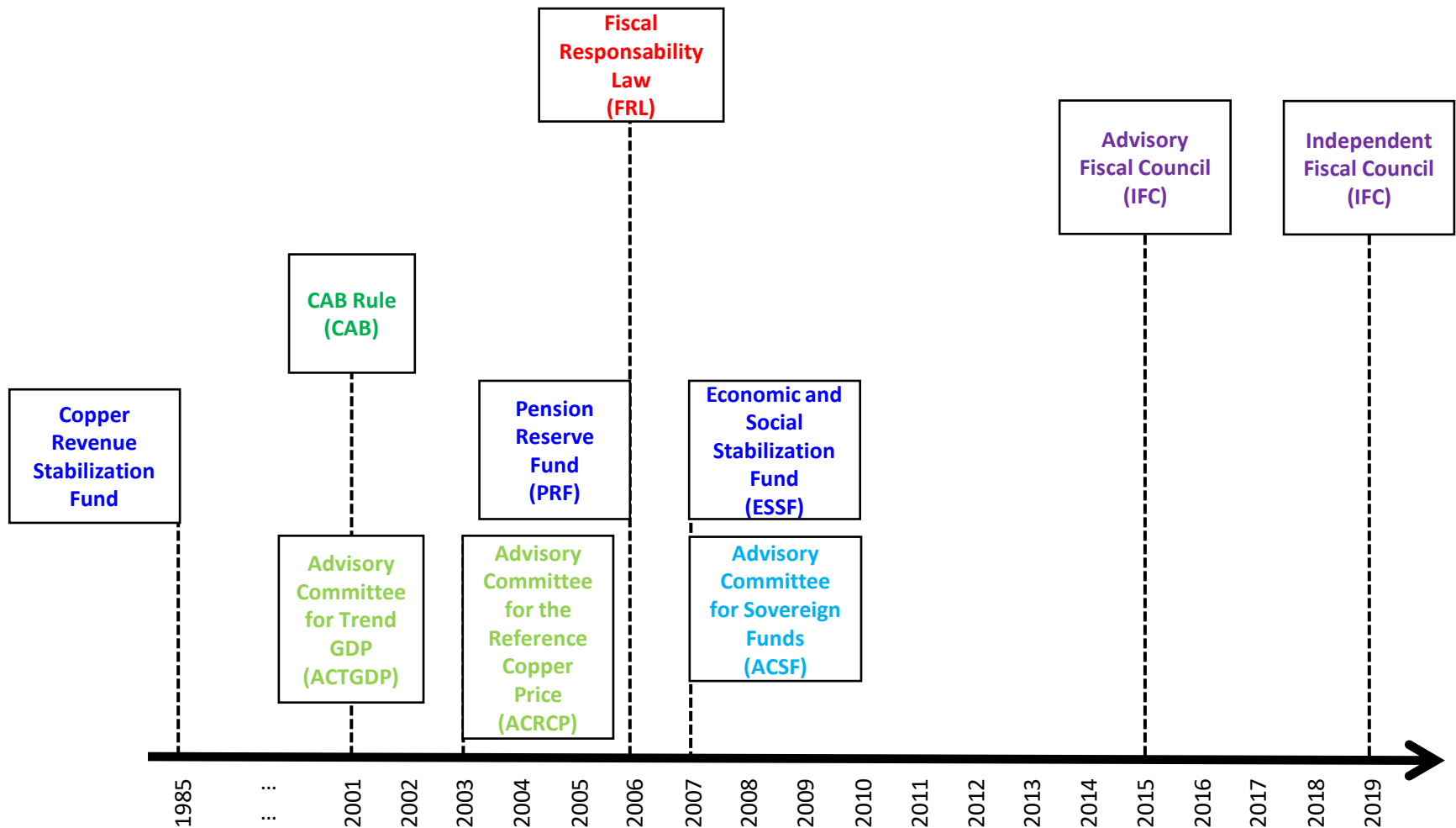


Motivation

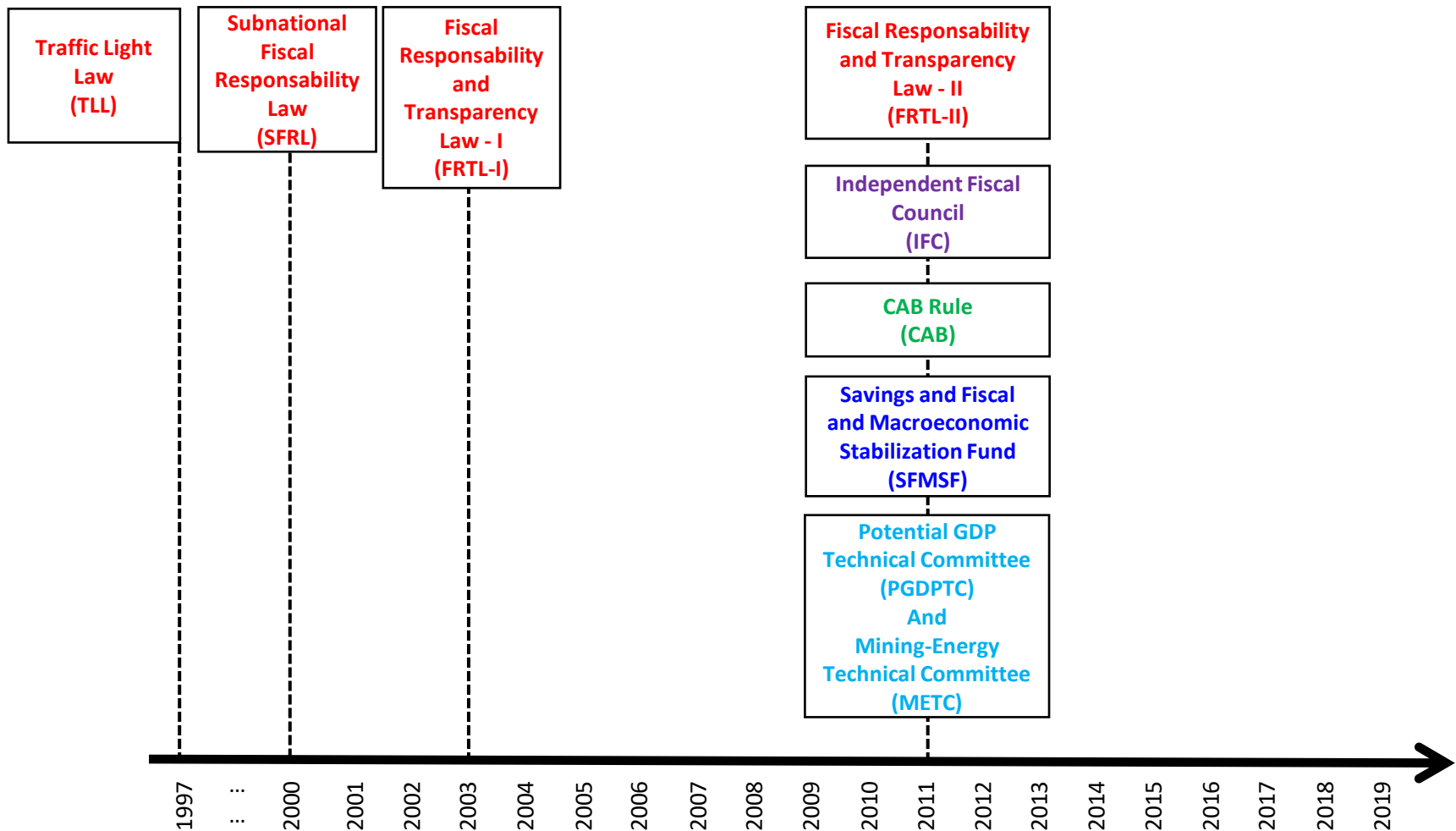
- Developed **fiscal** framework: based on several fiscal institutions that contribute **to fiscal and macro performance**
- Fiscal rules: key building block of frontier fiscal institutions
- Covid19: assessing the experience of Chile, Colombia, and Peru could be timely and enlightening
- This paper focuses on three closely related issues:
 - (i) Description of evolution of fiscal frameworks
 - (ii) Empirical assessment of hypotheses on the cyclical behavior and the sustainability of key fiscal variables
 - (iii) Policy proposals for improvements of fiscal frameworks and policy

2. Evolution of Institutional Frameworks

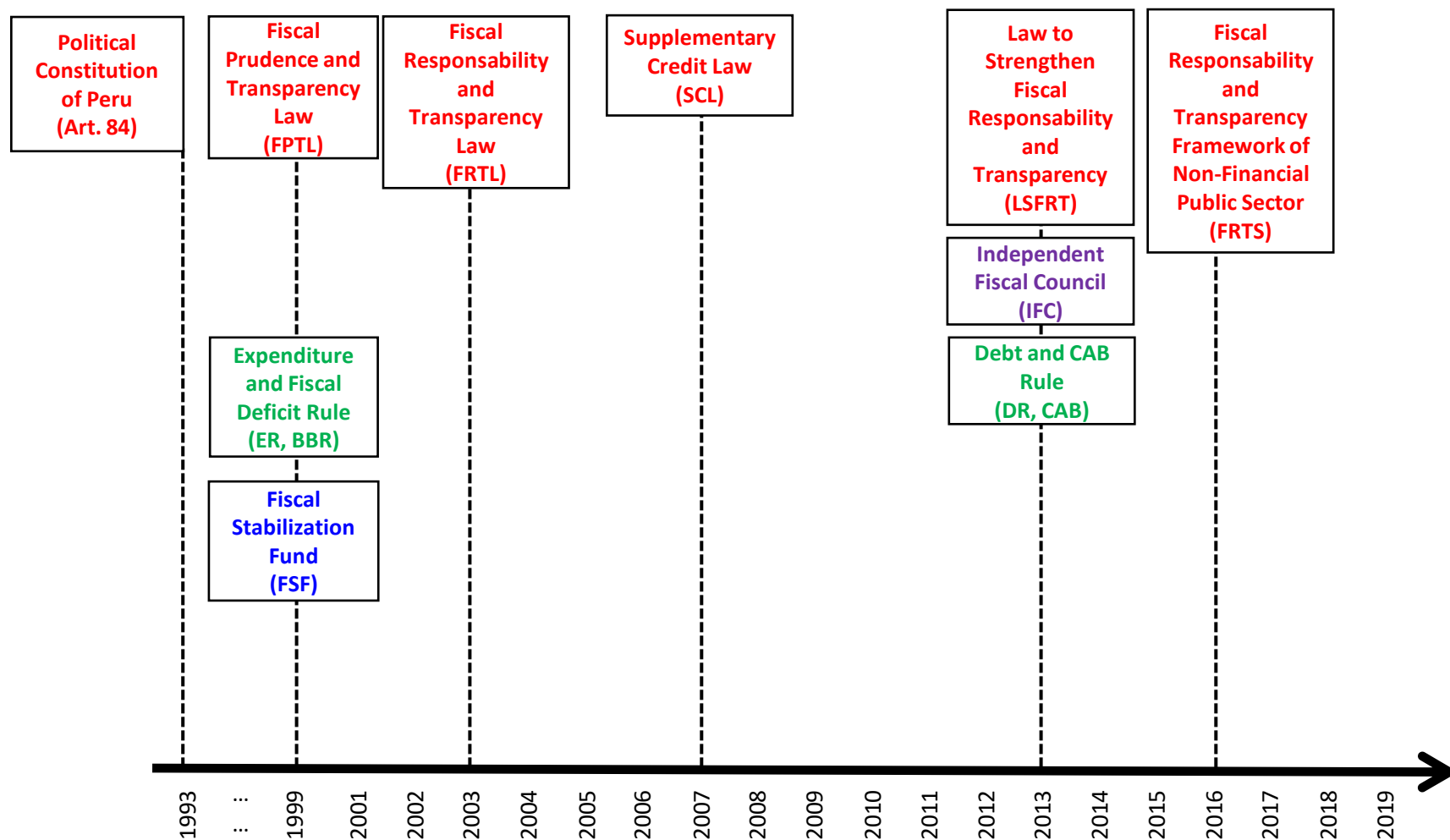
Development of Chile's Institutional Framework for Fiscal Policy



Development of Colombia's Institutional Framework for Fiscal Policy



Development of Peru's Institutional Framework for Fiscal Policy



3. Hypotheses, Data, and Estimation Techniques

Four hypotheses on the performance of fiscal rules

- **Hypothesis 1:** *the quantitative target of the fiscal rule does not depend on cyclical conditions*
- **Hypothesis 2:** *the fiscal rule is associated to a weaker procyclical (or stronger countercyclical) behavior of the ratio of total public expenditure to GDP*
- **Hypothesis 3:** *the fiscal rule is associated to a weaker procyclical behavior of the ratio of public investment debt to GDP*
- **Hypothesis 4:** *the fiscal rule is associated to a weaker procyclical behavior of the ratio of public debt to GDP*

Quarterly data of key fiscal variables

Variable	Description	Measure	Source
Output Gap	Corresponds to (effective GDP - trend GDP) / trend GDP * 100. The calculation of trend GDP corresponds to the trend component of the HP filter applied to the series of real effective GDP	% of trend GDP	the author based on BCCH, BRP, DANE
Main Commodity Price	In the case of Chile and Peru, the price of BML copper is used. In the case of Colombia, the WTI oil price is used.	USD/lbs. and USD/barrel	BCCH, BRP, DANE
Government Expenditure	Corresponds to expenditure on personnel, consumer and production goods and services, interest, subsidies and donations, pension benefits, public investment, capital transfers and others	% of GDP	DIPRES/BRP/DANE
Public Investment	Public Expenditure destined to create, increase, improve or replace the stocks of public physical capital and / or human capital. The Investment includes all investment activities carried out by Central Government entities, Non-Financial Public Companies and the Rest of the General Government.	% of GDP	DIPRES/BRP/DANE
Gross Public Debt	Gross public debt	% of GDP	DIPRES/BRP/DANE
Quantitative Target	In the case of Chile and Colombia, it corresponds to the value of the CAB goal. The value defined for year t is maintained in the quarters of that year until the value is modified in the fourth quarter. In the case of Peru, the value of the quantitative target for year t is maintained in the quarters of that year. The target considers the transitory limits and for years that the target was suspended, I use the previous targets.	% of GDP	DIPRES/MHC/DANE

Estimation Techniques

- **Econometric Regressions**

Hypothesis 1: Three-state multinomial logit regression

$$\varphi(\Delta fr_t = j) = \varphi(\beta_0 + \beta_1 gdp_t + \beta_2 pc_t + e_t)$$

Hypothesis 2-4: econometric estimations

$$fv_t = \beta_0 + \beta_1 gdp_t + \beta_2 cp_t + \beta_3 D_t^{FR} gdp_t + \beta_4 D_t^{FR} pc_t + e_t$$

$$\Delta fv_t = \gamma_0 + \gamma_1 \Delta gdp_t + \gamma_2 \Delta cp_t + \gamma_3 D_t^{FR} \Delta gdp_t + \gamma_4 D_t^{FR} \Delta pc_t + u_t$$

where: fr_t is fiscal rule target, fv_t is fiscal variable, gdp_t is output gap, cp_t is commodity price, e_t , u_t are disturbance terms, and D_t^{FR} is fiscal rule period dummy

- **VAR Analysis and Impulse Response Functions**

Hypothesis 1-4: VAR Estimation

$$Y_t = B(L)Y_{t-1} + U_t$$

where $B(L)$ is the lag polynomial, and U_t is the vector of reduced form innovations

4. Results

Country Results on Hypotheses 1 - 4

- **Hypothesis 1 (fiscal rule targets)**
 - ✓ Chile: higher CP and higher GDP raise the CAB rule target
 - ✓ Peru: neither CP nor GDP have changed expenditure and balance rule targets
- **Hypotheses 2 (gov. expenditure) and 3 (public debt)**
 - ✓ Chile: fiscal policy is counter-cyclical since the fiscal rule: higher CP and higher GDP lower both expenditure and investment
 - ✓ Colombia: fiscal policy is weakly countercyclical since the fiscal rule: higher CP lower (weakly) expenditure, but not investment
 - ✓ Peru: fiscal policy is weakly countercyclical: higher CP and higher GDP lower (weakly) expenditure, but not investment
- **Hypothesis 4 (public debt)**
 - ✓ Country results are largely consistent with hypotheses 2 and 3.

5. Reform Proposals

Reform Proposals (motivated by empirical results and urgent post-2022 stabilization)

- **Chile:**
 - a) Adopt multi-year budget horizon and complement existing BBR rule for the CAB with a debt rule
 - b) Establish escape clauses and a clear treatment of public investment
 - c) Strengthen the Independent Fiscal Council
- **Colombia**
 - a) Complement the existing BBR rule for the CAB with a debt rule and define more clearly the estimation methods of key unobservables and parameters of the rule
 - b) Strengthen countercyclicality of fiscal policy, strengthen the Independent Fiscal Council, and improve Sovereign Wealth Fund
- **Peru**
 - a) Complement existing debt rule with a BBR rule for the CAB
 - b) Avoid the frequent changes in rules, target values, and parameters
 - c) Strengthen the Independent Fiscal Council

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