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**CORPORATE GOVERNANCE AND CORPORATE RISK-
TAKING: EVIDENCE FROM LATIN AMERICA**

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*Dedicado con amor a mi querida esposa Katherine y a mi adorada
hija Emilia. Su constante apoyo y cariño han iluminado cada paso de
este arduo camino. Gracias por ser mi fuente de inspiración y por
compartir este logro conmigo*

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SIGLAS Y ACRÓNIMOS

ADR	American Depositary Receipts
AFP	Administradora de Fondos de Pensiones
AR2	Second-order Autocorrelation
BCS	Bolsa de Comercio de Santiago
BVL	Índice de la Bolsa de Valores de Lima
CAPEX	Capital Expenditures
CEO	Chief Executive Officer
GMM	Generalised Method of Moments
I+D	Investigación + Desarrollo
IBOVESPA	Índice da Bolsa de Valores de São Paulo
IGBC	Índice General de la Bolsa de Colombia
IPC	Índice de Precios y Cotizaciones
IPSA	Índice de Precios Selectivo de Acciones
LNCSs	Large Non-Controlling Shareholders
MERVAL	Índice de Mercado de Valores de Buenos Aires
MLS	Multiple Large Shareholders
MILA	Mercado Integrado Latinoamericano
NAICS	North American Industry Classifications System
NPV	Net Present Value
OLS	Ordinary Least Squares
R+D	Research + Development
SEC	Securities and Exchanges Commissions
UAI	Uncertainty Avoidance Index
VAN	Valor Actual Neto
VIF	Variance Inflation Factor

CAPÍTULO 1: Planteamiento general de la investigación

CAPÍTULO 1

Planteamiento general de la investigación

1.1. Introducción

El riesgo corporativo como constructo, a pesar de una extensa investigación en la literatura financiera, aún no ha recibido una definición universalmente aceptada. Esta cuestión reviste gran relevancia para el campo, dado que la definición o medida empleada puede condicionar los resultados obtenidos. No obstante, la asunción de riesgo generalmente se define como una estrategia empresarial dirigida hacia lo desconocido, incrementando la probabilidad de que los rendimientos reales de una inversión no coincidan con las expectativas (Baird & Thomas, 1985; Li, Jahera, et al., 2013; Rauch et al., 2009).

Holton (2004) subraya que las decisiones financieras sobre asunción de riesgo deben contemplar dos componentes: exposición e incertidumbre. El primero alude al grado en que la empresa es vulnerable a la decisión, es decir, a mayor exposición, mayor será el impacto en la salud financiera de la empresa. Esto se manifiesta cuando la empresa asigna una cantidad significativa de recursos a decisiones financieras con una alta probabilidad de fracaso pero que, al mismo tiempo, poseen una considerable capacidad de generar valor a la empresa. El segundo componente hace referencia a la falta de certeza en los rendimientos futuros de la decisión financiera de toma de riesgo, lo cual disminuye la posibilidad de que la empresa se prepare anticipada y adecuadamente a los posibles efectos que puedan surgir. Holton (2004) destaca que se parte del supuesto de que las empresas son tomadoras de riesgo; no obstante, en realidad, al carecer de conciencia propia, son incapaces de asumir riesgos de manera directa. En lugar de ello, operan como intermediarias que canalizan los riesgos que son asumidos por los máximos directivos, consejeros de administración, accionistas, entre otros actores relevantes.

La asunción de riesgo es una estrategia corporativa esencial debido a su potencial impacto en el valor de la empresa, su supervivencia a largo plazo y competitividad (Faccio et al., 2011; Nguyen, 2011; Shapira, 1995). A un nivel agregado, esta estrategia desempeña un papel fundamental en la acumulación de capital social y progreso tecnológico, erigiéndose como uno de los cimientos del crecimiento económico de un país (John et al., 2008). Coherentemente con esta perspectiva, la teoría financiera postula que las empresas deben asumir riesgos considerables para lograr rendimientos significativos (Damodaran, 2007; Song et al., 2021). Se explican así algunas decisiones corporativas arriesgadas que aumentan el valor de la empresa, como la innovación, la incursión en nuevos mercados, la introducción de nuevos productos y la inversión en Investigación y Desarrollo (I+D), entre otras (Nguyen, 2012). En otras palabras, una mayor asunción de riesgo corporativo implica una mayor disposición a la búsqueda de proyectos arriesgados con Valor Actual Neto (VAN) positivo.

Por el contrario, la aversión al riesgo es un rasgo del comportamiento humano de los directores o los accionistas que puede conducir hacia inversiones de riesgo subóptimas, actuando como un mecanismo de expropiación de riqueza (Boubaker et al., 2016; John et al., 2008; Mishra, 2011). Por lo tanto, la estrategia de riesgo corporativo presenta dos caras distintas: por un lado, sirve como una herramienta valiosa para impulsar el crecimiento y maximizar el valor de la empresa; no obstante, por otro lado, la aversión al riesgo podría desembocar en una asignación ineficiente de los recursos de la empresa.

Dado lo previamente expuesto, adquiere un carácter esencial comprender los factores que influyen en la asunción o aversión de riesgo para alcanzar el éxito en el ámbito empresarial. Diversos estudios proporcionan evidencia sobre los factores, tanto a nivel individual de las empresas como a nivel agregado del país, que explican la asunción de riesgo. En el primer nivel de análisis la literatura ha abordado el efecto de diversos elementos de gobierno corporativo, tales como las características de la alta dirección, estructura de propiedad y la composición del

consejo de administración (Hoskisson et al., 2017; Kalia & Gill, 2023; Martino et al., 2020). Múltiples investigaciones subrayan la importancia de los mecanismos de gobierno corporativo para lograr una gestión de riesgo eficaz (Boubaker et al., 2016; John et al., 2008; Mishra, 2011; Nguyen, 2011). Así, se consigue optimizar la asignación de recursos de la empresa, resguardar los intereses de todas los partícipes de la empresa y reducir la probabilidad de extracción de beneficios privados en detrimento de la riqueza de algunos accionistas.

1.2. Motivación de la tesis

La tesis tiene su principal justificación en el intento de explicar la relación de ciertos mecanismos de gobierno corporativo con la estrategia de riesgo empresarial, dentro de un contexto de economías latinoamericanas. Desde esta perspectiva, resulta de importancia exponer las distintas motivaciones que han impulsado la investigación en este ámbito.

La evidencia ha demostrado que la estructura de gobierno corporativo desempeña una función esencial en la gestión eficiente del riesgo, contribuyendo así a una mejor distribución de los recursos de la empresa. Aunque varios estudios han demostrado la influencia de ciertos mecanismos de gobierno corporativo, como las características del director general, la estructura de propiedad y la composición del consejo de administración en la gestión del riesgo, la evidencia no es concluyente (Kalia & Gill, 2023). En esta línea, el presente estudio se desarrolla con el propósito de proporcionar evidencia empírica con relación a si determinados mecanismos internos de gobierno corporativo pueden guiar a las empresas hacia una postura proactiva en la asunción de riesgo, evitando así la pérdida de valor que podría derivar de decisiones excesivamente conservadoras.

En primer lugar, los directores generales, al ser los principales responsables de la gestión empresarial, ostentan la autoridad y las competencias necesarias para influir en la estrategia de riesgo de una empresa mediante políticas financieras, como el

endeudamiento, inversión en I+D y gastos de capital, entre otros (Ferris et al., 2017; Low, 2009). En este contexto, ciertos atributos de los directores generales, como, por ejemplo, sus características demográficas, psicológicas, culturales y adquiridas, definen sus preferencias de riesgo, influyendo así en la propensión o aversión al riesgo de la empresa (Farag & Mallin, 2018; Martino et al., 2020).

En segundo lugar, la estructura de propiedad ha sido objeto de amplias investigaciones y es considerada uno de los mecanismos de gobierno corporativos más influyentes en relación con el riesgo corporativo. Dado que los accionistas son perceptores residuales de renta, la variabilidad de los indicadores de rendimientos y su aversión al riesgo son factores claves que influyen en sus decisiones (Fama & Jensen, 1983). De esta manera, los principales accionistas tienen el poder de voto y los incentivos, tanto financieros como no financieros, para influir en el riesgo corporativo (Boubaker et al., 2016; Mishra, 2011).

Finalmente, el consejo de administración desempeña una función fundamental en asegurar una gestión eficaz de riesgo de una empresa (Poletti-Hughes & Briano-Turrent, 2019; Sila et al., 2016). Aunque el consejo de administración no participa de manera activa y regular en la formulación de la estrategia de riesgo, sí tiene la responsabilidad de supervisar las estrategias de riesgo adoptadas por los altos ejecutivos (Kalia & Gill, 2023).

Asimismo, la asunción de riesgo corporativo desempeña un papel sumamente relevante en la promoción del crecimiento económico a largo plazo, particularmente en los mercados emergentes (John et al., 2008; Jumreornvong et al., 2018). En estos contextos, la limitada protección legal para los inversores y la concentración de propiedad, usualmente en manos de familias o grupos empresariales, propician la aparición de conflictos de intereses entre los accionistas controladores y los minoritarios (Claessens & Yurtoglu, 2013; Cueto, 2013; La Porta et al., 1999). Los accionistas controladores, por un lado, tienen incentivos para supervisar a los directivos pero, por otro, tienen el poder para disfrutar de

beneficios personales a expensas del resto de los accionistas (Gutiérrez & Pombo, 2009).

En consecuencia, la escasa protección legal de los inversores frecuente en las economías emergentes, fomenta la obtención de beneficios personales a través de una estrategia conservadora de riesgo corporativo (John et al., 2008). En otras palabras, los accionistas controladores pueden adoptar un comportamiento oportunista y una estrategia de riesgo subóptima para resguardar sus beneficios financieros y no financieros (Mishra, 2011). Este comportamiento se acentúa en estos contextos, donde el mercado de capitales tiende a ser menos profundo, limitando así la capacidad de los accionistas para reducir su exposición al riesgo mediante inversiones en otros instrumentos financieros.

En este sentido, los mecanismos internos de gobierno corporativo emergen como un posible sustituto para la escasa protección a los inversores (Attig et al., 2009; Boubaker et al., 2016; Gutiérrez & Pombo, 2009; Mishra, 2011). Por consiguiente, es imprescindible investigar cómo la estructura de gobernanza puede mitigar la desviación de recursos a decisiones financieras ineficientes en términos de riesgo.

En este punto también se hace preciso recordar que las economías latinoamericanas se caracterizan por poseer un sistema jurídico con una protección de los derechos de los accionistas y un mercado de capital menos desarrollado en comparación con las economías desarrolladas (Chong & Lopez-de-Silanes, 2007; Cueto, 2013; Sáenz González & García-Meca, 2014). Estos hechos conducen a que el control de la propiedad de las empresas latinoamericanas quede mayoritariamente en manos de un único gran accionista o de múltiples grandes accionistas, los cuales suelen ser familias o grupos empresariales (Gutiérrez & Pombo, 2009; Jara et al., 2019; Pombo & Taborda, 2017). Esta situación viene propiciada por la utilización de mecanismos que amplifican el control de los grandes accionistas, como la propiedad piramidal, acciones de clase dual y pactos de accionistas, intensificando

el riesgo de desacuerdos entre los accionistas mayoritarios y minoritarios (Briano-Turrent & Poletti-Hughes, 2017; Santiago-Castro & Brown, 2007).

Otro aspecto interesante radica en la significativa presencia de las empresas controladas por familias, representando esta estructura de propiedad la forma más común en las empresas latinoamericanas (Briano-Turrent & Poletti-Hughes, 2017; Claessens & Yurtoglu, 2013). Las familias suelen ser inversores con el suficiente poder de voto para tener un alto nivel de discrecionalidad en las decisiones de riesgo. En este sentido, las familias controladoras, en comparación con otros inversores con carteras más diversificadas, no solo se centran en la generación de riqueza financiera, sino que también dan importancia a la preservación de su riqueza socioemocional (Jones et al., 2008). En este caso, la arraigada tradición y cultura familiar, común en las empresas latinoamericanas, intensifica el vínculo emocional de los controladores con la empresa, lo cual ejerce una influencia significativa en la estrategia de riesgo de la empresa (Poletti-Hughes & Briano-Turrent, 2019; Poletti-Hughes & Williams, 2019).

Dado lo anterior, la estructura de gobierno ha sido ampliamente estudiada en las economías latinoamericanas, enfocándose principalmente en su impacto en el rendimiento financiero. Sin embargo, salvo notables excepciones, existe una escasa literatura que aborde la relación entre los mecanismos de gobierno y el riesgo corporativo. Llanos-Contreras et al. (2021) y Poletti-Hughes and Williams (2019) investigan el impacto de la propiedad familiar sobre el riesgo corporativo para una muestra de empresas mexicanas y chilenas, respectivamente. Los autores encuentran que las empresas familiares asumen mayores riesgos para salvaguardar su riqueza socioemocional. Por el contrario, Bonilla et al. (2010) encuentran que las empresas familiares chilenas son adversas al riesgo. Utilizando una muestra de empresas de Argentina, Brasil, Chile y México, Poletti-Hughes and Briano-Turrent (2019) determinan que la presencia de mujeres en el consejo de administración posee un sólido valor predictivo en la estrategia de riesgo.

Por tanto, el escenario latinoamericano proporciona un entorno singular para investigar el impacto de los mecanismos de gobierno corporativo en la estrategia de riesgo.

1.3. Objetivos de la tesis

1.3.1. Objetivo general

El objetivo general que persigue la tesis es **analizar el impacto del gobierno corporativo en la gestión de riesgo de empresas cotizadas de Latinoamérica.**

Dadas las particularidades de este contexto regional, incluyendo la concentración de propiedad, la presencia de familias o grupos empresariales y la débil protección legal de los inversores, surge la posibilidad de que la gestión del riesgo sea utilizada para fines de extracción de valor de la empresa. Adicionalmente, es necesario resaltar que la investigación en torno al riesgo corporativo en empresas cotizadas de Latinoamérica, a excepción de algunos casos notables, se encuentra escasamente desarrollada. Por ello, es importante comprender cómo la estructura de gobierno corporativo puede actuar como un mecanismo de control y garantizar la eficiencia de la estrategia de riesgo.

1.3.2. Objetivos específicos

Para lograr este objetivo general, se han definido los siguientes tres objetivos específicos, que guiarán el desarrollo de la investigación.

- i. Identificar la relación entre las características del director general y la gestión del riesgo corporativo.

El director general, como máxima autoridad en una empresa, ostenta la responsabilidad de la estrategia corporativa. Partiremos de la idea de que sus atributos observables desempeñan un papel crucial en su aversión (o propensión) al riesgo, y, por consiguiente, en la ejecución de políticas de gestión del riesgo.

- ii. Identificar la relación entre la estructura de propiedad y la gestión de riesgo corporativo.

Este objetivo se centra en determinar cómo ciertos aspectos de la estructura de propiedad de las empresas, tales como la presencia de accionistas controladores, el poder de contestación de otros grandes accionistas y la identidad de los accionistas, tienen el potencial de modelar la gestión del riesgo.

- iii. Identificar la relación entre la composición de la junta directiva y la gestión de riesgo corporativo.

Este objetivo se enfoca en determinar cómo diversos tipos de consejeros pueden influir en la formulación de políticas de gestión de riesgo. Para abordar este objetivo, nos centraremos en las empresas familiares. En particular, examinaremos como la interacción entre los controladores familiares y ciertos tipos de consejeros, tales como los independientes y aquellos perteneciente a la familia, afecten el riesgo corporativo.

Para abordar estos objetivos específicos, se han diseñado tres estudios empíricos, detallados en los Capítulos 2, 3 y 4 de esta tesis.

1.4. Marco teórico

Con el propósito de analizar en profundidad el impacto de la estructura de gobierno corporativo en la asunción de riesgo corporativo, esta investigación se apoya en tres teorías fundamentales: teoría de los escalones superiores (*upper echelons theory*), teoría de la agencia y teoría de la riqueza socioemocional.

1.4.1. Teoría de los escalones superiores

El director general desempeña el papel de figura visible de la empresa y ostenta la responsabilidad frente al mercado en relación con las decisiones adoptadas por la compañía (Hambrick et al., 2001). Por este motivo, la influencia de las

características del director general sobre los resultados corporativos sigue teniendo actualidad como tema de investigación (Shen, 2021; Simsek, 2007). En este contexto, múltiples investigaciones han intentado responder a la cuestión sobre si las características de los gerentes impactan en sus decisiones y acciones, y cómo esto repercute en el desempeño de la compañía.

La llamada Teoría de los Escalones Superiores, formulada por Hambrick and Mason (1984), constituye un marco teórico que permite afrontar tal interrogante. Esta teoría constituye uno de los principales marcos teóricos para el análisis de cómo los rasgos de los directivos desempeñan un papel esencial en la formulación de sus decisiones estratégicas (Neely et al., 2020; Wang et al., 2016). Esta teoría se basa en la teoría conductista (Cyert & March, 1963), que sugiere la existencia de limitaciones racionales en los altos directivos, es decir, restricciones cognitivas e informativas que dificultan un proceso de toma de decisiones racional. En este sentido, los valores y preferencias cognitivas de los integrantes del equipo directivo influyen en la percepción, interpretación y elecciones estratégicas, las cuales a su vez influyen en los resultados de las empresas que dirigen (Hambrick, 2007). No obstante, estas dimensiones psicológicas son constructos difíciles de medir (Carpenter et al., 2004; Hambrick & Mason, 1984).

Sin embargo, la teoría de los escalones superiores afirma que las características sociodemográficas de los directores generales y otros altos ejecutivos influyen en las decisiones de las empresas que gestionan y, por tanto, en aspectos como, por ejemplo, el rendimiento (King et al., 2016; Post & Byron, 2015; Velte, 2020), riesgo corporativo (Farag & Mallin, 2018; Martino et al., 2020), tenencias de efectivo (Orens & Reheul, 2013; Sah et al., 2022), estructura de capital (Naseem et al., 2020), innovación (Kitchell, 1997; Talke et al., 2010), en otros. En consecuencia, los atributos del director general tienen una notable capacidad predictiva de decisiones financieras que no son completamente evidentes o predecibles por otros factores (Bertrand & Schoar, 2003).

En lo que respecta al riesgo corporativo, la teoría de los escalones superiores presenta interesantes argumentos para la comprensión de cómo las características del director general influyen en la toma de riesgo en la empresa. Diversos estudios han adoptado la teoría de los escalones superiores como marco conceptual y han demostrado que características observables, como la edad, el género, la duración en el cargo, la trayectoria profesional, el nivel educativo, la nacionalidad, la religión, y la dualidad de roles, entre otros, están relacionados con la aversión al riesgo u otros aspectos psicológicos o cognitivos que guían su comportamiento, repercutiendo, por tanto, en la estrategia de riesgo corporativo de las empresas que dirigen (Díez-Esteban et al., 2019; Elsaid & Ursel, 2011; Faccio et al., 2016; Farag & Mallin, 2018; Martino et al., 2020; Palvia et al., 2015; Peltomäki et al., 2021; Serfling, 2014). De esta manera, la teoría de los escalones superiores ofrece un marco conceptual que amplía los factores que influyen en el riesgo corporativo, incorporando los atributos personales del director general y no únicamente los elementos de la empresa o del país.

1.4.2. Teoría de la agencia

La teoría de la agencia ofrece una serie de argumentos ampliamente explorados para comprender la forma en que los partícipes de la empresa emplean la estrategia de riesgo corporativo con el propósito de alcanzar sus propios objetivos. Los cimientos de esta teoría fueron sentados en el estudio pionero de Berle and Means (1932), y se erige como un pilar fundamental en la literatura de gobierno corporativo. En este sentido, los mencionados autores postulan que la separación entre propiedad y control, es decir cuando el propietario (principal) delega el trabajo de dirigir la empresa a directores ejecutivos (agentes), genera conflictos de interés entre ambas partes, cada vez que la propiedad accionarial se encuentra dispersa.

Posteriormente, Jensen and Meckling (1976) apuntan que en el caso de que el director general (agente) y el accionista (principal) sean maximizadores de utilidad

con funciones de utilidad divergentes, es plausible que el primero actúe en pos de sus propios intereses y obtenga beneficios privados a expensas de la riqueza del segundo. Esto se debe a que los accionistas son individuos neutrales al riesgo, debido a que por su condición de demandantes residuales pueden reducir su riesgo mediante la diversificación de su cartera de inversiones. Por el contrario, los ejecutivos son adversos al riesgo debido a que su patrimonio personal y trayectoria profesional están directamente vinculados al éxito de la empresa que dirigen. Esta discrepancia de intereses lleva a que los ejecutivos, ante la ausencia de una supervisión eficaz, puedan emplear la estrategia de riesgo corporativo como un medio para redirigir los recursos de la empresa hacia decisiones financieras subóptimas en riesgo, rechazando proyectos creadores de valor (Balachandran & Faff, 2015; John et al., 2008; Sheikh, 2019). Este comportamiento excesivamente conservador se origina en la aversión al riesgo por parte de los directivos generales (Amihud & Lev, 1981; Fama, 1980).

En contraposición a lo previamente expuesto, diversos artículos han refutado el problema de agencia principal-agente planteado por Jensen and Meckling (1976), demostrando que la concentración de propiedad es más común que la propiedad dispersa, incluso en economías desarrolladas. Estas investigaciones comenzaron en la década de los 80, como evidencian los estudios de Demsetz and Lehn (1985) y Shleifer and Vishny (1986) en muestras de empresas estadounidenses. Luego, la indagación adquirió un enfoque global: La Porta et al. (1999) para 27 de los países más ricos del mundo; Faccio and Lang (2002) para países de Europa occidental; y Claessens et al. (2002) para países de Asia oriental.

En este contexto, los accionistas controladores experimentan una doble motivación. Por una parte, tienen incentivos para reducir el nivel de discrecionalidad del director general en la toma de decisiones pero, por otra parte, cuentan con el poder para obtener beneficios privados en detrimento de la riqueza de los accionistas minoritarios, dando origen así al problema de agencia principal-principal (La Porta et al., 1999). Los accionistas controladores tienden a poseer

carteras no diversificadas y, en consecuencia, promueven una estrategia subóptima de riesgo como forma de minimizar su exposición a la riqueza de la empresa y apropiarse de los flujos de efectivo de los demás accionistas (Faccio et al., 2011; John et al., 2008; Mishra, 2011; Paligorova, 2009).

Así, emerge el concepto de gobierno corporativo como un conjunto de reglas y procedimientos diseñados para mitigar los conflictos de interés que pueden surgir entre los diversos partícipes de la empresa (Claessens & Yurtoglu, 2013). Esta serie de mecanismos disciplina el comportamiento de los directivos, accionistas, miembros del consejo de administración y otros partícipes de la empresa, con el propósito de garantizar que los proveedores de fondos obtengan un rendimiento satisfactorio de sus inversiones (Shleifer & Vishny, 1997). En este sentido, los mecanismos de gobierno corporativo son considerados herramientas que pueden limitar el comportamiento oportunista y la discreción en la toma de decisiones, tanto de los directivos como de los accionistas, reducir el riesgo de desacuerdos entre los distintos partícipes de la empresa, y por consiguiente, mitigar la propensión a adoptar una postura adversa al riesgo corporativo (Hoskisson et al., 2017; Jiraporn et al., 2015; Mishra, 2011; Sheikh, 2019).

1.4.3. Teoría de la riqueza socioemocional

La teoría de la riqueza socioemocional, propuesta por Gómez-Mejía et al. (2007), señala que los aspectos emocionales de las familias controladoras cumplen un papel importante en la toma de decisiones de las empresas familiares. Esta teoría se fundamenta en la teoría prospectiva (*prospect theory*) desarrollada por Wiseman and Gomez-Mejia (1998), la cual sugiere que los directivos no mantienen una posición neutral o adversa al riesgo, sino que ajustan su comportamiento de riesgo según un marco de referencia. Con base a esto, los directivos adoptan una postura adversa (propensa) al riesgo en función de si los rendimientos son superiores (inferiores) a las expectativas, a fin de mantener (recuperar) sus beneficios personales (Lim et al., 2010).

Gómez-Mejía et al. (2007) y Gomez-Mejia et al. (2010) señala que las familias controladoras no sólo buscan maximizar la riqueza financiera, sino también asegurar beneficios no financieros, los cuales están vinculados a sus necesidades emocionales en relación con la empresa, lo que se denomina “riqueza socioemocional”. Estos beneficios incluyen la preservación de la identidad y la dinastía familiar, el control familiar de la empresa, el altruismo, la transferencia generacional y la reputación familiar, entre otros. En este sentido, la estrategia empresarial de las empresas familiares es guiada por los estrechos lazos emocionales entre la familia y la empresa (Berrone et al., 2012; Du et al., 2022).

Para evaluar lo anterior, Gómez-Mejía et al. (2007) analizaron a 1.237 almazaras familiares de España. Estas empresas poseían la opción de unirse a una cooperativa, lo que implicaba beneficios financieros, pero también la pérdida del control familiar. La mayoría de las empresas optó por rechazar la propuesta, asumiendo un mayor riesgo de fracaso o rendimientos inferiores a los objetivos (*performance hazard*), a fin de preservar sus beneficios personales. En otra palabras, las familias controladoras estarán dispuestas a asumir riesgos que comprometen el rendimiento financiero de la empresa si con esto evitan pérdidas potenciales de la riqueza socioemocional de la familia (Gomez-Mejia et al., 2010). Por otra parte, un mayor riesgo de fracaso implica que la supervivencia de la empresa se encuentra en peligro, por lo que las empresas familiares adoptarán proyectos con menor variabilidad en los rendimientos (*venturing risk*). Es decir, las empresas familiares buscarán prevenir la quiebra y la pérdida de toda la riqueza socioemocional favoreciendo proyectos conservadores en términos de riesgo (Chrisman & Patel, 2012).

Estos resultados ilustran cómo la toma de decisiones en empresas familiares está influenciada por factores emocionales y sociales en lugar de la simple búsqueda de la riqueza financiera. De esta manera, las empresas familiares pueden mostrar una aversión o propensión al riesgo simultáneamente, dependiendo de cómo perciban las amenazas a su riqueza socioemocional (Llanos-Contreras et al., 2021). Por

tanto, esta teoría cuestiona los supuestos tradicionales de la teoría de la agencia (Berrone et al., 2012; Fernando et al., 2014; Lim et al., 2010), que afirman que las empresas familiares son inherentemente adversas al riesgo debido a la ineficiente diversificación de la familia (Boubaker et al., 2017; Mishra, 2011).

La teoría de la riqueza socioemocional ha sido utilizada como marco teórico para estudiar el comportamiento de riesgo de las empresas familiares. Así, por ejemplo, Gomez-Mejia et al. (2010) señalan que las empresas familiares evitan las decisiones de diversificación debido a que la entrada de proveedores de fondos externos y capital humano específico ajeno a la familia llevaría a una disminución del control familiar. Por su parte, Llanos-Contreras et al. (2021) y Poletti-Hughes and Williams (2019) proporcionan evidencia de que las empresas aceptan mayores niveles de riesgo con tal de salvaguardar su riqueza socioemocional. Por el contrario, Chrisman and Patel (2012) indican que las empresas familiares invierten menos en I+D que las empresas no familiares. Por otro lado, Boellis et al. (2016) afirman que las empresas familiares son más propensas a entrar a un mercado extranjero mediante nuevas empresas en lugar de adquisiciones de empresas ya existentes. Ambas estrategias se explican por el hecho de que estas inversiones están normalmente asociada a la búsqueda de recursos externos, lo cual diluiría el control familiar y, por consiguiente, llevaría a una pérdida en la riqueza socioemocional.

1.5. Diseño metodológico

Con el propósito de alcanzar los objetivos previamente planteados, en esta tesis se adopta un enfoque basado en el método científico. El punto de partida consistió en realizar una revisión exhaustiva de artículos científicos publicados en revistas académicas. Este proceso permitió constatar que la estrategia de riesgo en empresas de economías latinoamericanas aún no ha sido explorada en profundidad, dejando espacio para abordar preguntas de investigación innovadoras. Posteriormente, se formularon hipótesis que se estructuraron en tres estudios empíricos.

El presente trabajo de investigación se basa en el estudio de un conjunto de empresas cotizadas en las principales economías de América Latina. El período de análisis se extiende desde el año 2005 hasta el 2020. Se aplicaron diversos filtros con el propósito de asegurar la validez y robustez de los resultados obtenidos, excluyendo las empresas financieras, no locales o con un patrimonio contable negativo. Adicionalmente, para controlar el sesgo de supervivencia, se incluyeron tanto empresas activas como inactivas.

En cuanto a la recolección de datos se utilizaron diversas fuentes de información, que se detallan en la Tabla 1. Si bien una gran parte de la información financiera-contable de las empresas provino de la base de datos Refinitiv Eikon, se hizo preciso un trabajo de recopilación manual de otro considerable volumen de los datos. Los atributos de los directores generales, la estructura de propiedad y la composición del consejo de administración se obtuvieron principalmente a partir de la revisión de informes anuales, sitios web corporativos y actas de juntas de accionistas, entre otras fuentes.

Tabla 1. Descripción de las fuentes de información

Información	Fuente de información
Riesgo corporativo	Refinitiv Eikon
Características del director general	Recopilación manual desde informes anuales, sitios web corporativos, comunicados de prensa oficiales de la empresa, Refinitiv Eikon, Bloomberg, LinkedIn, sitio web de las dimensiones de Hofstede y sitios web de prensa especializados en negocios
Estructura de propiedad	Recopilación manual desde reportes anuales, actas de constitución de empresas, Registro Civil e Identificación de Chile, formularios 20-F de la <i>Securities and Exchange Commission</i> (SEC) y sitios web corporativos
Composición del consejo de administración	Recopilación manual desde reportes anuales, actas de juntas generales anuales y extraordinarias de accionistas e informes de reguladores
Variables de control a nivel de empresa	Refinitiv Eikon y recopilación manual desde reportes anuales corporativos e informes de reguladores

Un punto importante en esta investigación es la identificación de medidas adecuadas para evaluar el riesgo corporativo. La falta de evidencia concluyente en la literatura en este aspecto puede atribuirse en gran medida a las diversas medidas utilizadas. Usualmente, la literatura cuantifica el concepto de riesgo corporativo a

través de variables basadas en la variabilidad de indicadores de rendimiento, como, por ejemplo, la variabilidad del rendimiento de las acciones o la variabilidad del beneficio de la empresa. Las medidas de riesgo basadas en el precio de la acción no se ven directamente afectadas por la estrategia de riesgo corporativo e incorporan la percepción que los participantes del mercado tienen sobre decisiones arriesgadas tomadas por la empresa (Pathan, 2009). Peltomäki et al. (2021) destacan que estas medidas de riesgo corporativo reflejan fielmente cómo los participantes del mercado interpretan la gestión de riesgo de la empresa, las decisiones financieras, las preferencias de riesgo de los distintos partícipes, el riesgo inherente al propio mercado y otros aspectos específicos de la empresa.

Es relevante señalar que varios estudios en finanzas corporativos utilizan medidas contables para evaluar el riesgo corporativo, como la desviación del rendimiento de los activos u otras medidas de rendimiento (véase, por ejemplo, Boubaker et al., 2016; Faccio et al., 2016; John et al., 2008; Kim, 2011; Llanos-Contreras et al., 2021; Mishra, 2011; Vo, 2018). Sin embargo, estas medidas de riesgo requieren una serie temporal de datos anuales, lo cual aumenta la posibilidad de manipulación de información contable (Ferris et al., 2017).

El método de estimación para comprobar nuestras hipótesis de investigación se basa en el enfoque de datos de panel. En este sentido, se utiliza tanto información transversal como longitudinal para capturar observaciones de cada empresa en diferentes momentos a lo largo tiempo. Las estimaciones se obtienen mediante el Método Generalizado de los Momentos (GMM, por sus siglas en inglés) en dos etapas, conforme a lo propuesto por Arellano and Bover (1995) y Blundell and Bond (1998). El uso del sistema GMM en dos etapas mejora el procedimiento GMM original al incorporar instrumentos tanto en niveles como en diferencias, lo que permite abordar problemas clave en este tipo de estudios, como la heterogeneidad inobservable y la endogeneidad. Esta metodología nos permite controlar los efectos fijos de la empresa no observables, que pueden afectar al riesgo corporativo. Además, a diferencia de otros enfoques, como los efectos fijos, este

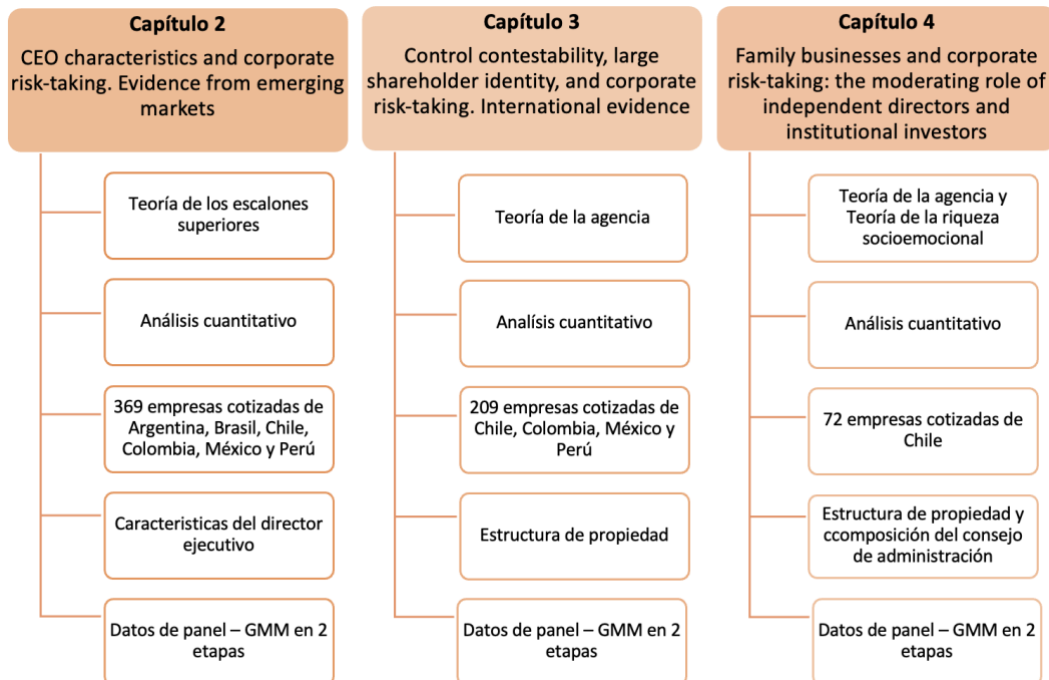
método aborda la problemática de la causalidad inversa, un desafío recurrente en las investigaciones en el ámbito del gobierno corporativo (Roberts & Whited, 2013; Wintoki et al., 2012).

1.6. Estructura de la tesis

En primer lugar, queremos destacar que los objetivos de esta tesis se hayan enmarcados en los campos científicos del Programa de Doctorado en Contabilidad y Finanzas Corporativas de la Universidad de Valencia, al estudiar la estrategia de riesgo corporativo, dentro de la línea de investigación de gobierno corporativo.

La tesis se estructura en cinco capítulos. El capítulo 1, tiene una naturaleza introductoria y se dedica a la conceptualización y descripción de las motivaciones que dieron origen la investigación. Asimismo, en dicho capítulo se exponen los objetivos de la tesis, se contextualiza el marco teórico que enmarca la investigación y se detalla el diseño metodológico aplicado en cada uno de los estudios empíricos. A continuación, en los capítulos 2, 3 y 4 se incluyen los tres estudios empíricos que abordan los objetivos específicos planteados. Finalmente, en el capítulo 5 se presentan las conclusiones y se discuten críticamente los resultados de los anteriores capítulos, además de abordar las principales contribuciones, implicaciones y limitaciones de la investigación. Este capítulo también ofrece orientaciones para futuras líneas de investigación. La Figura 1 esquematiza de manera concisa la estructura de los estudios empíricos.

Figura 1. Estructura de la tesis



A continuación, se describen los capítulos 2, 3 y 4, en los cuales se contemplan los estudios empíricos que conforman el núcleo de esta tesis.

1.6.1. Capítulo 2: CEO characteristics and corporate risk-taking: Evidence from emerging markets¹

El capítulo 2 tiene como propósito abordar el primer objetivo específico, que se centra en la relación entre las características del director general y la gestión del riesgo. La teoría financiera clásica sostiene que los gerentes son contratados con el fin de maximizar el valor a la empresa y la riqueza de los accionistas, lo cual debería manifestarse en un aumento del precio de la acción. Siguiendo esta premisa, las

¹ Este estudio se encuentra publicado en la revista *Economic Research-Ekonomska Istraživanja*. Cid-Aranda, C., & López-Iturriaga (2023). C.E.O. characteristics and corporate risk-taking: evidence from emerging markets. *Economic Research-Ekonomska Istraživanja*. 36(2). DOI: <https://doi.org/10.1080/1331677X.2023.2175008>. En 2021 esta revista estaba incluida en el segundo cuartil del campo “Economics” de *Journal of Citations Report*. Versiones anteriores del artículo fueron presentadas en 12th Financial Markets Corporate Governance Conference (2022) (Monash Business School, Australia) y 16th Academy of Innovation, Entrepreneurship, and Knowledge (ACIEK) Conference (2022) (Universidad de Sevilla, España).

características del director general no deberían tener un poder explicativo sobre la estrategia de riesgo de la empresa (Faccio et al., 2016). No obstante, diversos estudios reportan evidencia de que ciertas características de los ejecutivos poseen un poder predictivo en lo que respecta a la gestión de riesgo corporativo, en línea con la teoría de los escalones superiores propuesta por Hambrick and Mason (1984). Desde esta perspectiva, el perfil del director general influye en su aversión al riesgo y, por ende, en la gestión de riesgo de la empresa que dirige (Damodaran, 2007).

De acuerdo con lo anterior, fundamentándonos en la teoría de los escalones superiores, evaluamos el primer objetivo específico de la tesis empleando una muestra de 369 empresas latinoamericanas no financieras que cotizan en las principales bolsas de valores de Argentina, Brasil, Chile, Colombia, México y Perú. Este estudio mide el perfil del director general a través de una serie de características observables, como son la edad, permanencia en el cargo, sexo, dualidad, nivel educativo, condición de extranjero y el horizonte profesional. Utilizando el método GMM en dos etapas, nuestros resultados indican que el impacto de la edad y permanencia en el cargo sobre el riesgo corporativo no es uniforme, sino que mantienen una relación no lineal en forma de U invertida. A medida que el director general envejece, parece que mejoran sus habilidades para gestionar el riesgo, volviéndose cada vez más propenso al riesgo. Sin embargo, llega un punto en el que prevalece la preferencia por la estabilidad laboral, lo que reduce su inclinación a fomentar decisiones arriesgadas. Por otra parte, la relación entre la antigüedad en el cargo y el riesgo corporativo también es no lineal, pero con forma de U. A medida que la antigüedad en el cargo aumenta, los directores generales muestran una mayor preocupación por su carrera profesional, lo que se traduce en una disminución en el nivel de riesgo de las empresas que lideran. No obstante, a medida que adquieren experiencia y ganan la confianza de los accionistas y consejo de administración, mejoran sus habilidades para gestionar el riesgo de la empresa, lo que se traduce en una promoción progresiva de decisiones cada vez más arriesgadas. Por último, el estudio presenta evidencia de que las directoras generales están relacionadas negativamente con la asunción de riesgo

corporativo, mientras que las variables de dualidad, formación académica, extranjería y horizonte laboral generan un efecto contrario.

Entre las contribuciones de nuestra investigación podríamos citar, en primer lugar, la evidencia de que las características del director general influyen efectivamente en el proceso de toma de decisiones de la empresa, particularmente en lo referente a la gestión de riesgo. En segundo lugar, a nuestro juicio, este estudio representa la primera investigación que examina el impacto de atributos observables del director general en la asunción de riesgo en el contexto latinoamericano. Por último, se constata que la edad y permanencia en el cargo del director general, dos conceptos que frecuentemente se utilizan de manera intercambiable en la literatura, arrojan resultados divergentes en lo que concierne a su impacto sobre el riesgo corporativo.

1.6.2. Capítulo 3: Control contestability, large shareholder identity, and corporate risk-taking: International evidence²

El propósito del capítulo 3 trata el segundo objetivo específico al aclarar la relación entre la estructura de propiedad y la gestión de riesgo corporativo. La literatura subraya que el problema de agencia principal-principal es una constante en economías con una protección débil a los inversores, donde las familias y grupos empresariales actúan como poderosos accionistas controladores, con la habilidad y los incentivos para obtener beneficios privados a expensas del resto de los accionistas (Cueto, 2013; La Porta et al., 1999). En este contexto, la estructura de propiedad se presenta como un mecanismo interno de gobierno corporativo que puede generar efectos variados en las economías emergentes. En otras palabras, no todos los tipos de accionistas controladores tienen la misma capacidad para supervisar los problemas de agencia (Ducassy & Guyot, 2017). De hecho, la

² Versiones anteriores del artículo fueron presentadas en VII Encuentro Internacional de Especialización para la Investigación en Economía y Empresa (2022) (Universidad de Málaga, España) y 18th Academy of Innovation, Entrepreneurship, and Knowledge (ACIEK) Conference (2023) (ESIC University, Spain). Actualmente el estudio se encuentra en proceso de evaluación en una revista científica.

heterogeneidad de creencias, preferencias y capacidades de los grandes accionistas desempeña un papel clave en las políticas financieras (Cronqvist & Fahlenbrach, 2008).

Además, la presencia de grandes accionistas no controladores también ejerce un efecto moderador en la relación entre los accionistas controladores y el riesgo corporativo. Estos accionistas tienen el poder de voto para supervisar y desafiar la posible aversión al riesgo de los accionistas controladores (Boubaker et al., 2016; Mishra, 2011). Sin embargo, la presencia de múltiples grandes accionistas no constituye necesariamente un mecanismo efectivo para frenar la desviación de los flujos de efectivo de la empresa. Los grandes accionistas no controladores pueden agregar su poder de voto para mejorar el proceso de supervisión al accionista controlador y aliviar los problemas de agencia (hipótesis de supervisión), o pueden formar una coalición con otros grandes accionistas con objetivos similares para compartir los beneficios privados del control (hipótesis de coalición) (Attig et al., 2008; Ducassy & Guyot, 2017; Jara-Bertin et al., 2008; Laeven & Levine, 2008; Maury & Pajuste, 2005; Ouyang et al., 2020; Pombo & Taborda, 2017).

Mediante el uso de una muestra de 209 empresas pertenecientes a las principales bolsas de valores de los países miembros del Mercado Integrado Latinoamericano (MILA): Chile, Colombia, México y Perú, y empleando la metodología de GMM en dos etapas, se demuestra que la estructura de propiedad está relacionada con el nivel de riesgo corporativo. Proporcionamos evidencia de que la heterogeneidad de los accionistas controladores impacta de manera significativa en el riesgo de las empresas. Cuando las familias o entidades gubernamentales son los principales accionistas de la empresa, la relación con el riesgo corporativo es negativa. En contraste, se constata que los inversores extranjeros en calidad de accionistas controladores incrementan el riesgo de las empresas. Asimismo, nuestros resultados indican que la presencia de grandes accionistas no controladores cumple una función crucial en la supervisión de la actitud conservadora de los accionistas controladores, particularmente en el caso de empresas controladas por familias. Por

último, nos centramos en las empresas familiares y evaluamos si los distintos tipos de accionistas no controladores desempeñan funciones distintas en términos de gobernanza en relación con la supervisión del comportamiento conservador del accionista controlador. En este sentido, observamos que, cuando los primeros dos grandes accionistas son familias, estas forman una coalición de control con intereses alineados para desviar fondos hacia decisiones financieras de menor riesgo. Sin embargo, cuando el segundo accionista es un inversor institucional, este desafía la autoridad de la familia y bloquea las decisiones que disminuyan la expropiación de la riqueza de los accionistas minoritarios, como las decisiones de riesgo subóptimas.

Este trabajo contribuye a la literatura de diversas maneras. En primer lugar, a pesar de que los accionistas mayoritarios suelen emplear decisiones de riesgo financiero subóptimas como mecanismo para expropiar los flujos de los accionistas minoritarios, mostramos que no todos ellos comparten los mismos incentivos ni la misma capacidad para supervisar el riesgo de la empresa. En segundo lugar, el papel de gobernanza que desempeñan los grandes accionistas no controladores en la orientación de las decisiones de riesgo de los accionistas controladores de naturaleza conservadora no es evidente. En otras palabras, la identidad de los grandes accionistas no controladores determina los incentivos para colaborar o desafiar al accionista mayoritario y, por lo tanto, influye en la eficacia de la supervisión del comportamiento asumido en la toma de riesgo por parte de la empresa. Finalmente, planteamos que la dualidad inherente a la posición de los grandes accionistas no controladores es particularmente significativa en el contexto de las empresas familiares. De este modo, contribuimos a la comprensión de cómo la estructura de propiedad puede agudizar o atenuar determinados desafíos de agencia en las empresas familiares.

1.6.3. Capítulo 4: Family business and corporate risk-taking: the moderating role of independent directors and institutional investors³

El capítulo 3 tiene como propósito analizar el segundo y tercer objetivo específico, relativos a la relación entre la estructura de propiedad y la gestión de riesgo corporativo; así como la relación entre la composición del consejo de administración y la gestión de riesgo corporativo. Estos objetivos serán abordados en el contexto de empresas controladas por familias. La gestión del riesgo corporativo en las empresas familiares constituye una de las estrategias más debatidas, por lo que no debe extrañar que la literatura aún no haya alcanzado resultados concluyentes. Debido al substancial poder de voto que caracteriza a las familias controladoras, estas tienen la capacidad de influir en el riesgo empresarial mediante diversas decisiones financieras, como las de inversión (Anderson et al., 2012; Boellis et al., 2016; Caprio et al., 2011; Muñoz-Bullón & Sanchez-Bueno, 2011), financiación (Crocí et al., 2011; González et al., 2013), diversificación (Anderson & Reeb, 2003; Jones et al., 2008), dividendos (Berrone et al., 2010), entre otras. Los accionistas familiares, según la teoría de la agencia, poseen particularidades que los caracterizan como individuos adversos al riesgo, promoviendo decisiones financieras con niveles bajos de riesgo. Los accionistas familiares poseen carteras no diversificadas, con una gran parte de su riqueza financiera vinculada a la empresa (Anderson et al., 2012; Bertrand & Schoar, 2006). Además, su participación en la propiedad accionarial de la empresa les posibilita designar miembros de la familia en cargos de alta administración o integrarlos en el consejo de administración (Boubaker et al., 2017; Burkart et al., 2003). En contraste, la teoría de la riqueza socioemocional sostiene que, debido a la naturaleza de las familias y a diferencia de otros inversores, estas se centran no sólo en la

³ Versiones anteriores del artículo fueron presentadas en XXXVII Encuentro Nacional de Escuelas y Facultades de Administración (ENEFA) (2021) (Universidad Católica del Norte, Chile), Business Association of Latin American Studies (BALAS) 2022 Annual Conference (NOVA School of Business and Economics, Portugal), 12th Financial Markets Corporate Governance Conference (2022) (Monash Business School, Australia) y V Workshop de Asociación Científica de Economía y Dirección de la Empresa (2022).

Actualmente el estudio se encuentra enviado a una revista científica.

riqueza financiera, sino que también en la riqueza socioemocional. Aspectos como la transferencia del control de la empresa a generaciones posteriores, la reputación e identidad familiar, así como la retención del control de la empresa en manos de la familia influyen en el riesgo corporativo de las empresas bajo su control (De Massis et al., 2019; Gómez-Mejía et al., 2007). Asimismo, otros factores explican las diferencias en los niveles de riesgo entre las empresas familiares y no familiares. Así, los mecanismos internos de gobierno corporativo, como los consejeros independientes o los inversores institucionales, pueden influir en la supervisión del consumo excesivo de beneficios privados por parte de los controladores familiares (Chang & James, 2020). Por un lado, los consejeros independientes aportan experiencia y conocimientos para supervisar eficazmente la estrategia de riesgo de las empresas familiares, lo que se traduce en una mayor probabilidad de proyectos arriesgados pero generadores de valor (Chen & Hsu, 2009; Su & Lee, 2013; Voordeckers et al., 2007). Por otro lado, los inversores institucionales, como los fondos de pensiones, priorizan la riqueza financieras de las empresas familiares, relegando los beneficios socioemocionales que solo las familias controladoras disfrutan (Fernando et al., 2014). En este sentido, los fondos de pensiones chilenos, como inversores experimentados con sólidos recursos, desempeñan un papel activo en el mercado de capitales chileno (OECD/International Finance Corporation, 2011).

Mediante una muestra de 72 empresas chilenas cotizadas en la Bolsa de Comercio de Santiago (BCS) y la aplicación del método de GMM en dos etapas, obtenemos que la presencia de la familia tanto en la propiedad como en el consejo de administración se relacionan negativamente con el nivel de riesgo corporativo. Además, tanto la inclusión de miembros independientes en el consejo de administración como la presencia de fondos de pensiones en la estructura de propiedad se configuran como mecanismos eficaces de gobierno corporativo para mitigar el comportamiento conservador de las empresas familiares.

Consideramos que ese trabajo contribuye a la literatura, en primer lugar, conjugando las teorías de la agencia y socioemocional, proponiendo que ambas pueden conciliarse para ofrecer evidencia no contradictoria sobre el comportamiento de riesgo de las empresas familiares. En segundo lugar, empleamos los mecanismos de gobierno corporativo como fuentes de heterogeneidad dentro de las empresas familiares, demostrando su sólido poder predictivo en la estrategia de riesgo. En tercer lugar, constituye el primer estudio en presentar pruebas sobre cómo determinados mecanismos de gobierno corporativo influyen en los niveles de riesgo de empresas latinoamericanas. Esto es particularmente relevante en un contexto donde la protección legal a los inversores y las estructuras de gobierno corporativo son más débiles en comparación con países desarrollados, y las empresas familiares ejercen una influencia significativa debido a su sustancial participación accionaria y considerable discrecionalidad en la toma de decisiones. Por último, se aporta un proceso completo de cuantificación del concepto de propiedad familiar, lo que resulta de gran utilidad para atenuar las diferencias existentes en la literatura sobre empresas familiares.

CAPÍTULO 2: CEO characteristics and corporate risk-taking: Evidence from emerging markets

CAPÍTULO 2

CEO characteristics and corporate risk-taking: Evidence from emerging markets

2.1. Introduction

The CEO bears the highest responsibility within the company and is one of its most critical resources. Traditional theoretical approaches consider CEOs to be homogeneous individuals whose personal characteristics are irrelevant, such that corporate decisions are only explained by firm- or industry-level factors (Bertrand & Schoar, 2003; Huang & Kisgen, 2013). However, the Upper Echelons Theory points out that CEOs' experience, values and other attributes play a key role in their decisions and shape organizational outcomes (Hambrick & Mason, 1984). From this point of view, the company's decision-making process can be explained by a CEO's observable characteristics, such as age, tenure, or duality, as well as their psychological behavioural traits (Graham et al., 2013; Nguyen et al., 2018). Nevertheless, the impact of a CEO's profile on company outcomes remains an ongoing subject of inquiry and as yet there is no conclusive evidence as to how a CEO's characteristics impact organisational outcomes.

A growing stream of literature is focusing on the importance of CEO profile in corporate risk-taking. Specifically, several authors indicate that the CEO's characteristics can affect corporate risk through financial decisions, such as R&D expenditures, diversification, financial leverage, and acquisition, among others (Matta & Beamish, 2008; Serfling, 2014). Yet despite this, the relationship between CEO profile and corporate risk-taking remains relatively unexplored, and the evidence is still unclear. This is due to four main reasons. First, most studies on demographic characteristics usually employ CEO age and CEO tenure measures

indistinctly. While CEO age and CEO tenure are highly correlated, the two metrics do not necessarily reflect the same CEO characteristic. Second, the mixed evidence can be explained by the disagreement concerning what is the appropriate measure of corporate risk to be applied. Third, the literature has neglected other CEO features that may have significant explanatory power, such as CEO duality, gender, foreignness, and educational background, among others. Finally, only a few studies address the relationship between CEOs' observable characteristics and corporate risk-taking outside the context of the USA. In this sense, there is a lack of studies on emerging economies.

Considering the above-mentioned gaps, this study aims to empirically test the impact of CEO profile on the firm's risk-taking behaviour. Accordingly, we attempt to address the following research questions: How are the demographic characteristics of CEOs –age and tenure– related to corporate risk-taking? Are there other demographic, cultural or acquired traits (such as gender, power, educational background or foreignness) that are relevant to risk-taking?

To answer these questions, we follow a threefold method. First, we define a set of CEO profile variables to measure CEO risk behaviour, and we also determine the appropriate risk-taking measures. Second, we construct a panel data by matching time-series with cross-section data to deal with unobservable heterogeneity. We also control for different firm-level characteristics that might impact the firm's riskiness. Third, we test the potential explanatory power of a comprehensive set of personal CEO traits on corporate risk-taking by using the two-step Generalised Method of Moments (GMM) to address the endogeneity problem and reverse causality.

We report enlightening results using a sample of 369 Latin American companies between 2005 and 2020. Our initial findings indicate that the relationship between CEO age and risk-taking is non-linear and displays an inverted U-shape. Hence, CEO age at first positively impacts the level of risk-taking. However, the

relationship becomes negative when the CEO turns about 45 years old. This indicates that ageing generates a better ability for younger CEOs to learn and adapt quickly to complex environments. For older CEOs, ageing causes a greater preference for the status quo. The second set of results shows that the relationship between CEO tenure and risk-taking is also non-linear but U-shaped. In other words, as tenure increases, the CEO becomes more entrenched and avoids risky decisions. Nevertheless, when CEO tenure reaches around 17 years, the benefits of long tenure –such as greater trust with other stockholders or experience– outweigh the costs, and the risk-taking increases. We also test whether CEO gender influences risk-taking. Our results suggest that greater female conservatism leads to lower corporate risk in female-led firms. In contrast, we find that the concentration of power in the hands of a single executive –CEO duality– and a CEO's education decrease risk aversion. Interestingly, CEOs with a master degree in business sciences increase corporate risk. We also find that foreign CEOs are positively associated with corporate risk-taking. Additional results indicate that the CEO's career horizon –adjusted by the industry, and the uncertainty avoidance of the CEO's country of nationality– affect risky financial decisions.

We contribute to the extant literature in several aspects. First, we contribute to the literature addressing the link between a CEO's characteristics and firm-level issues. Our results align with the Upper Echelon Theory proposed by Hambrick and Mason (1984) and show that the CEO's observable characteristics have explanatory power on corporate risk-taking. Second, to the best of our knowledge, this is the first work in Latin America to study the impact of CEOs' observable attributes on risk-taking. Latin American countries are characterised by a high concentration of ownership – usually in the hands of families– and weak investor protection (Gallego & Larrain, 2012; Mellado & Saona, 2020; Santiago-Castro & Brown, 2011). Nevertheless, in terms of corporate governance, there have been significant changes in legislation and regulation to protect investors (Gaitán et al., 2018). Previously, Briano-Turrent et al. (2020) reported that long-tenured CEOs pay less dividends, while Gallego and

Larrain (2012) studied the impact of CEOs' characteristics on compensation premium. However, none were able to conclude the relationship between CEO profile and risk-taking behaviour. Third, we disentangle the effect of two closely related CEO traits: age and tenure. Longer tenure has usually been associated with older age. However, anecdotal evidence confirms that this situation does not hold for all CEOs. For instance, Mauricio Varela, CEO of the Chilean company Socovesa, had been in that position for over ten years at the end of 2013, and he was only 40 years old, while the CEO of Cementos Bío Bío, had been in the position for only four years at the end of 2008 and yet was over 64 years old. Thus, we identify experience in the company with longer CEO tenure rather than with being an older CEO. This is consistent with Cline and Yore (2016), who find that the market undervalues companies with old CEOs but rewards those with long-tenured CEOs. Following this view, we report that CEO age and CEO tenure affect risk-taking in opposite directions. Finally, as a fourth contribution, we use different market-based measures of risk-taking that cannot be managed directly by the CEO but which reflect the market perception of the CEO's financial decisions, business strategy, and risk-taking behaviour.

The paper proceeds as follows. Section 2 discusses the literature and proposes the main hypotheses; section 3 describes the research model, statistical methodology, sample, and variables; section 4 presents our empirical results and the discussion; and section 5 provides the conclusion, contributions, implications, and suggestions for future research.

2.2. Literature review and hypotheses

Corporate risk-taking is likely one of the firm-level issues to be most affected by managerial traits. Prior research has identified three main characteristics of managers through which the CEO's traits can affect corporate risk-taking: the CEO's social capital, the CEO's cultural and institutional environment, and the CEO's demographic characteristics.

As far as the CEO's social capital is concerned, Ferris, Javakhadze, & Rajkovic (2017, 2019) show a positive association between CEO social capital and aggregate corporate risk-taking because social capital alters the risk tolerance of the most connected agents, reinforces the individual sense of power, and enhances opportunities in the labour market.

Another stream of research has explored the cultural and institutional environment in which CEOs take their decisions. For example, Baxamusa and Jalal (2016), Díez-Esteban et al. (2019), and Jiang et al. (2015) highlight the role played by religious backgrounds in corporate risk-taking. As regards cultural environment, some authors have reported a relationship between risk-taking and a number of cultural dimensions such as power distance, masculinity, individualism, uncertainty avoidance, harmony, and long-term orientation (Díez-Esteban et al., 2019; Li, Griffin, et al., 2013) or the legal protection of investors rights (Acharya et al., 2011; Boubakri, Cosset, et al., 2013).

In this paper, we focus on the relationship between CEOs' demographic characteristics and corporate risk-taking. More specifically, we study the influence of seven traits: age, tenure, gender, power, educational background, foreignness, and career horizon.

2.2.1. CEO age

The literature provides evidence that ageing affects CEO incentives as well as their physiological and psychological characteristics (Crocì et al., 2017). Younger CEOs (as opposed to older CEOs) prefer riskier financial decisions to prove their skills (Serfling, 2014). Zhang et al. (2016) called this phenomenon the "signaling-incentive effect", in which younger CEOs act aggressively and make risky but profitable financial decisions in order to build their reputation. Similarly, younger CEOs possess cognitive skills that can better adapt to strategic changes (Cline & Yore, 2016). Thus, young CEOs acquire better cognitive skills as they get older.

The relationship between CEO age and corporate risk-taking could therefore be positive when a young CEO runs the company. However, there comes a time when ageing is associated with less energy and cognitive abilities (Kitchell, 1997). As a result, older CEOs prefer the stability of future returns. Kim et al. (2016) and Yim (2013) report that older CEOs increase their desire for the status quo in their life and reduce R&D expenditures because they are likely to fall short of benefiting from the success of these investments.

From a psychological point of view, older people are resistant to complex problems because ageing generates negative changes in their cognitive capacity (Mata et al., 2011). In this sense, older CEOs increase conflicts of interest with the rest of the stakeholders by disregarding value-enhancing risky projects. Risk-taking partly explains the misalignment of interests between the CEO and shareholders that both parties are willing to assume. Shareholders desire risky projects with high potential for growth opportunities, while older CEOs, unlike shareholders, cannot diversify their risk so easily.

In summary, assuming more risk generates different incentives between older and younger CEOs. For younger CEOs, the benefits of taking on more risk outweigh the costs, while the opposite occurs with older CEOs. Thus, younger CEOs gain more experience over the years, which translates into a greater ability to manage risky projects. However, there comes a time when managers become less risk-tolerant. Taking this into account, our first hypothesis postulates that:

Hypothesis 1: CEO age has an inverse U-shaped relationship with risk-taking

2.2.2. CEO tenure

The literature has failed to report any conclusive results regarding how CEO tenure explains firms' risk behaviour. On the one hand, short-tenured CEOs are concerned about their reputation, career, and about understanding the company as

well as the industry (Walters et al., 2007). These short-tenured CEOs need the supervision and guidance of the board of directors or top management team to enhance their skills and to understand how to interact with internal stakeholders (Shen, 2003). They also have little power in the company and are afraid of being misunderstood by the company or the labour market. On the other hand, McClelland et al. (2012) point out that as the years pass, CEOs worry about their working career due to the fear that their specific human capital will not adapt to the other companies in the market. Moreover, long-tenured CEOs have a different agenda than those who are still building and maintaining their careers. The former focus on projects with short-term payoffs rather than risky projects with long-term growth potential.

However, time can also result in an alignment of interests between CEO and stakeholders. Long-tenured CEOs have already earned the trust of the board and other influential stakeholders, so they can better maintain business stability in the midst of risky decisions. The match theory points out that long CEO tenure is due to the fact that their skills and knowledge match the characteristics and needs of the company (Allgood & Farrell, 2003). In contrast, traditional agency theory indicates that CEOs can take advantage of their power, entrench themselves in their position and pursue their interests over the firm's interests.

On the other hand, in emerging economies such as Latin America –characterised by a high concentration of ownership and shareholder representatives on the board– there is a low separation between management and control and a low probability of managerial opportunism (Pombo & Taborda, 2017). While long-tenured CEOs do not risk their career and job stability, they accumulate firm- and industry-specific knowledge and develop specific human capital, which improves the firm's performance (Nguyen et al., 2018). In this sense, the risk behaviour of long-tenured CEOs has been shaped by failure-based learning, and they evaluate risky decisions more objectively and systematically (Simsek, 2007). In addition, companies with

long-tenured CEOs have a better alignment of interests between senior management and company culture, which translates into organisational outcomes (Hartnell et al., 2016).

We thus anticipate that as tenure increases, CEOs take fewer risks. However, once they have earned the trust of the rest of the powerful internal stakeholders, they are able to use their experience and knowledge to manage risky decisions.

Hypothesis 2: CEO tenure has a U-shaped relationship with risk-taking

2.2.3. Female CEOs

In recent years, some studies have reported that the heterogeneous composition of senior management in terms of gender diversity has a positive impact on firm performance. Khan and Vieito (2013) find that companies led by female CEOs display superior performance but lower corporate risk. Controversially, the literature has stereotyped female CEOs as being conservative and risk-averse individuals (La Rocca et al., 2020). Faccio et al. (2016), and Huang and Kisgen (2013) report that firms run by female CEOs take less risky corporate finance decisions because female CEOs are more risk-averse, less overconfident, and are associated with a higher risk of unemployment. In the same vein, Sah et al. (2022) and Xu et al. (2019) point out that female senior management maintain higher levels of cash holdings for investing in financial decisions that reduce the firm's risk. This view is confirmed by Palvia et al. (2015), who find that female CEOs and chairwomen act conservatively in periods of financial stress, and by Adhikari et al. (2019), who report that female-led companies avoid risky strategies with positive NPV but high litigation probability, such as aggressive R&D investments or intensive advertising. Similar results were also obtained by Elsaid and Ursel (2011), according to whom a change from a male CEO to a female CEO is linked to reduced R&D spending, lower volatility in cash flows, and increased cash holdings. Thus, our third hypothesis is as follows:

Hypothesis 3: Female CEOs have a negative relationship with risk-taking

2.2.4. CEO duality

CEO duality has been widely studied from different perspectives. From an agency theory point of view, Adams et al. (2005) point out that CEO duality generates a concentration of power in a single executive, which allows them to influence the company's decision-making without significant objections from other internal stakeholders. Kim et al. (2009) indicate that CEO duality decreases board vigilance, increases managerial opportunism, and reduces the firm's risk through unrelated diversification. In this way, CEOs maintain the status quo in the firm, preserve their job stability and prestige, and obtain personal benefits at the expense of shareholders. In summary, agency theory supports that these CEOs use their power and discretion in the company's management to avoid risky decisions and to entrench themselves in their position.

In contrast, according to stewardship theory, CEO duality fosters energetic and unified leadership. Peng et al. (2007) note that CEO duality incentivises an efficient leadership unit that streamlines decision-making and has a positive impact on the performance of firms within a dynamic environment. Nguyen et al. (2018) report that CEO duality reduces board conflicts of interest and allows them to respond quickly to high-growth opportunities in complex environments. Similarly, Peni (2014) finds a positive relationship between CEO duality and firm performance. Finally, for a list of Latin American companies, Gaitán et al. (2018) find no evidence that CEO duality negatively impacts firm outcomes.

Since there is no consensus as to which theory is best suited to emerging economies such as Latin America, we propose two hypotheses:

Hypothesis 4a: CEO duality has a negative relationship with risk-taking

Hypothesis 4b: CEO duality has a positive relationship with risk-taking

2.2.5. CEOs' educational background

Naseem et al. (2020) point out that CEOs' educational background promotes efficient financial and investment decision-making. CEOs with a higher level of education are usually more creative, react faster to innovative ideas, and prefer risky and aggressive strategies (Bertrand & Schoar, 2003; Zhou et al., 2021). In a similar vein, CEOs with an MBA exhibit overconfidence and higher risk tolerance (Beber & Fabbri, 2012). Farag and Mallin (2018) find a positive relationship between a CEO's education and risk-taking measures because CEOs with postgraduate degrees are better informed about new trends and are more likely to pursue innovative ideas. Therefore, highly educated CEOs know to develop risky and more profitable projects (King et al., 2016).

We therefore suggest that the firm's financial decisions depend on the CEO's background. Specifically, we posit that CEOs with a business science master's degree possess more tools and skills to manage risk and take riskier decisions.

Hypothesis 5: Being a CEO with a business science background has a positive relationship with risk-taking

2.2.6. Foreign CEOs

Shaw (1990) points out that the CEO's nationality influences their cognitive ability and, thus, decision-making. Nielsen and Nielsen (2011) stress that diversity of nationality within senior management encourages constructive debate and improves the ability to assess risky projects. In fact, Graham et al. (2013) report that US CEOs exhibit different personality traits and attitudes –such as level of optimism– to non-US CEOs. Foreign CEOs are more likely to lead companies in risky industries (Hoang et al., 2019). Additionally, foreign CEOs have a larger network of international contacts (Fang et al., 2018) and specific knowledge of their native country's economy (Conyon et al., 2019).

We therefore anticipate that foreign CEOs have better abilities and resources to handle risky projects. Our sixth hypothesis thus reads as follows:

Hypothesis 6: Being a foreign CEO has a positive relationship with risk-taking

2.2.7. CEOs' career horizon

Retirement is the last step of the CEO's career, in which their track record is judged. In this sense, one common problem is the horizon problem, where the CEO pursues short-term decisions as they approach retirement (Davidson et al., 2007). As a general rule, the further away a CEO is from retirement, the longer their career horizon. CEOs with short career horizons are more likely to display myopic risk aversion because they reject risky projects with expected cash flows after retirement (Aktas et al., 2021). In other words, as they approach retirement, CEOs avoid risky decisions that might jeopardise their reputation or ruin the perception of their recent career (Matta & Beamish, 2008). The CEO's career horizon therefore influences their decision-making process. For the Italian market, both Wade et al. (2006) and Martino et al. (2020) provide empirical support for the fact that CEOs with longer career horizons make faster and riskier decisions because of their risk preferences. Similar results for US firms have been reported by McClelland et al. (2012). As a result, our seventh hypothesis postulates that:

Hypothesis 7: CEO's career horizon has a positive relationship with risk-taking

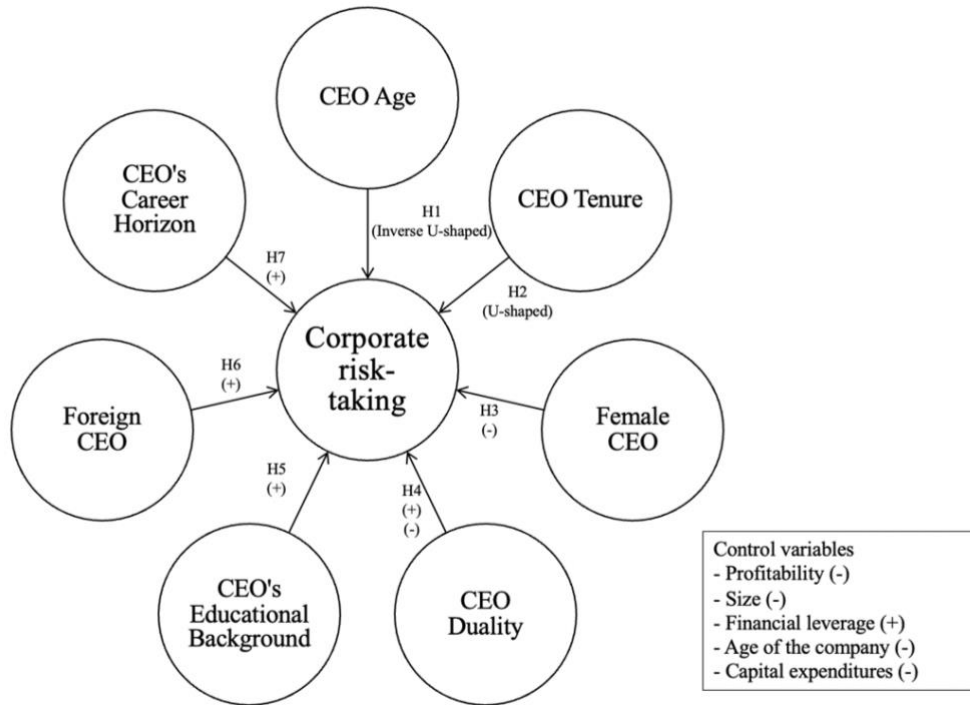
2.3. Empirical method

2.3.1. Research model

We capture the impact of CEO profile on corporate risk-taking by using a list of the CEO's observable characteristics. CEOs' risk aversion is a subjective measure and, in turn, is usually unknown or hard to measure correctly. In contrast, observable characteristics –such as age, tenure, gender, power, educational

background, foreignness, and career horizon— are more accessible. These variables thus allow us to proxy the CEO's risk preference. Figure 2 presents the hypotheses and the expected signs.

Figure 2. Hypotheses and expected signs



We have a panel data set with cross-sectional and longitudinal information, such that we control for unobservable heterogeneity that could affect corporate risk-taking (Baltagi, 2013). We propose equation (1) to identify the impact of a CEO's characteristics on corporate risk:

$$\text{Firm risk}_{it} = \beta_0 + \beta_k(\text{CEO characteristics}_{it}) + \omega_k(\text{Control variables}_{it}) + \gamma_i + \eta_i + \mu_t + \varepsilon_{it}, \quad (1)$$

where Firm risk_{it} are the two different measures of risk-taking for firm i at time t : Total Risk (TR) and Idiosyncratic Risk (IR). $\text{CEO characteristics}_{it}$ are the set of explanatory variables to examine the possible impact of CEO profile on firm risk.

We include CEO Age and CEO Tenure in linear and quadratic forms. We also introduce the rest of the CEO's characteristics: Female CEO, CEO Duality, CEO Master, Foreign CEO, CEO Career Horizon, and CEO UA Index. Control variables_{it} is the vector of firm characteristics potentially correlated with risk-taking: ROA, Size, LEV, Age, and CAPEX. We also include a set of fixed effects to control for unobservable industry-specific effects (γ_i), unobservable country-fixed effects (η_i), and time-variant fixed effects (μ_t). We use industry sector dummies based on the 2-digit NAICS Code to control for industry-fixed effects. Finally, ε_{it} is the stochastic error in the estimations.

To deal with the endogeneity problem and reverse causality, we use the two-step system Generalised Method of Moments (GMM) proposed by Arellano and Bover (1995) and Blundell and Bond (1998). This econometric technique provides more efficient and consistent estimates than ordinary least squares (OLS) or fixed effects. We run equation (1) using the two-step system GMM to deal with the potentially endogenous issues of all right-hand-side variables. As instruments we use all the independent variables lagged from t-1 to t-2. To test the validity of the instruments, we run the AR(2) and the Hansen post-estimation test. AR(2) measures the absence of second-order serial autocorrelation in the residuals. We use the Hansen test to test overidentifying restrictions and to assess whether the instruments are exogenously determined.

2.3.2. Sample

Our sample includes 369 companies from six Latin American countries: Argentina, Brazil, Chile, Colombia, Mexico, and Peru. According to the World Bank website, the market capitalization of listed domestic firms in these countries represents 98% of the whole Latin America region. The period of analysis spans from 2005 to 2020. We exclude financial and non-domestic firms and companies with negative equity because they are subject to specific requirements and

accounting standards. To deal with survivorship bias, we include active and non-active firms. We required at least four continuous years to be included in the final sample in order to obtain efficient estimates. We collect data from different sources. We use Refinitiv Eikon to obtain financial and accounting information. CEOs' observable characteristics were hand-collected from annual reports, corporate websites, financial databases, LinkedIn, and business press websites.

The final panel data consists of 3,949 firm-year observations and an average of 10.70 observations per firm. Panel A of Table 2 reports the panel composition. Brazil has the most significant participation in the sample, with 40.62%. Mexico and Chile account for 18.23% and 17.40%, respectively, while Argentina represents 11.57% of observations. The countries with the fewest observations are Peru and Colombia, with 7.42% and 4.76%, respectively. Panel B of Table 2 shows the composition of the sample by country-year.

Table 2. Panel composition

Panel A: Composition of the sample by country-firms																	
Country	Obs.	(%)	Firms	(%)	Av. Obs. Per Firm												
Argentina	457	11.57%	49	13.28%	9.33												
Brazil	1,604	40.62%	142	38.48%	11.30												
Chile	687	17.40%	63	17.07%	10.90												
Colombia	188	4.76%	19	5.15%	9.89												
Mexico	720	18.23%	69	18.70%	10.43												
Peru	293	7.42%	27	7.32%	10.85												
Total	3,949	100.00%	369	100.00%	10.70												
Panel B: Composition of the sample by country-year																	
Country	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Argentina	19	21	25	24	24	26	22	19	27	28	30	35	41	43	37	36	457
Brazil	50	62	70	98	102	106	108	109	109	107	108	111	112	112	119	121	1,604
Chile	37	43	47	38	38	48	43	50	48	45	42	43	49	44	36	36	687
Colombia	2	3	5	9	12	15	17	17	16	13	13	13	14	12	14	13	188
Mexico	28	33	37	38	39	40	45	45	48	51	52	53	56	54	53	48	720
Peru	12	17	22	21	19	22	21	22	20	18	16	20	19	17	14	13	293
Total	148	179	206	228	234	257	256	262	268	262	261	275	291	282	273	267	3,949

The number of observations is 3,949.

Table 3 reports the distribution of firms by industrial sectors of each country. As can be seen, the largest industrial sector is manufacturing, with 40.92% of the total sample.

Table 3. Distribution of firms by two-digit NAICS Code

NAICS Sector Name	Argentina	Brazil	Chile	Colombia	Mexico	Peru	Total
Agriculture, Forestry, Fishing, and Hunting	1 (2.04%)	4 (2.82%)	5 (7.94%)	0 (0.00%)	1 (1.45%)	1 (3.70%)	12 (3.25%)
Mining, Quarrying, and Oil and Gas Extraction	2 (4.08%)	4 (2.82%)	1 (1.59%)	3 (15.79%)	2 (2.90%)	8 (29.63%)	20 (5.42%)
Utilities	9 (18.37%)	22 (15.49%)	11 (17.46%)	5 (26.32%)	1 (1.45%)	3 (11.11%)	51 (13.82%)
Construction	5 (10.20%)	12 (8.45%)	4 (6.35%)	1 (5.26%)	8 (11.59%)	1 (3.70%)	31 (8.40%)
Manufacturing	22 (44.90%)	61 (42.96%)	22 (34.92%)	6 (31.58%)	29 (42.03%)	11 (40.74%)	151 (40.92%)
Wholesale Trade	1 (2.04%)	4 (2.82%)	2 (3.17%)	0 (0.00%)	0 (0.00%)	1 (3.70%)	8 (2.17%)
Retail Trade	1 (2.04%)	11 (7.75%)	8 (12.70%)	2 (10.53%)	7 (10.14%)	1 (3.70%)	30 (8.13%)
Transportation and Warehousing	2 (4.08%)	9 (6.34%)	3 (4.76%)	1 (5.26%)	9 (13.04%)	0 (0.00%)	24 (6.50%)
Information	6 (12.24%)	4 (2.82%)	3 (4.76%)	1 (5.26%)	8 (11.59%)	1 (3.70%)	23 (6.23%)
Professional, Scientific, and Technical Services	0 (0.00%)	1 (0.70%)	1 (1.59%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	2 (0.54%)
Administrative and Support and Waste Management and Remediation Services	0 (0.00%)	1 (0.70%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	1 (0.27%)
Educational Services	0 (0.00%)	3 (2.11%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	3 (0.81%)
Health Care and Social Assistance	0 (0.00%)	3 (2.11%)	1 (1.59%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	4 (1.08%)
Arts, Entertainment, and Recreation	0 (0.00%)	1 (0.70%)	1 (1.59%)	0 (0.00%)	1 (1.45%)	0 (0.00%)	3 (0.81%)
Accommodation and Food Services	0 (0.00%)	2 (1.41%)	1 (1.59%)	0 (0.00%)	3 (4.35%)	0 (0.00%)	6 (1.63%)
Total	49	142	63	19	69	27	369

This table reports the number (percentage) by the two-digit North American Industry Classification System (NAICS) Code. The number of observations is 3,949.

2.3.3. Variables

The literature has used different measures to capture the risk of corporate decisions. Whereas some prior studies proxy corporate risk through operating return volatility or some risky investment policies, such as R&D or firm diversification (Faccio et al., 2016; Yim, 2013; Zhang et al., 2016), the dominant stream of research has used market-based measures with stock price data (Aktas et al., 2021; Ferreira & Laux, 2007; Nguyen, 2011; Peltomäki et al., 2021; Serfling, 2014). Consequently, and following this line, we use stock return volatility and idiosyncratic risk as measures of risk-taking. This choice is consistent with the

literature on emerging economies (Farag & Mallin, 2018; Sayari & Marcum, 2018). To deal with the common problem of low liquidity, we remove stocks that do not trade on at least 80% of business days (Figlioli & Lima, 2019; Leite et al., 2018)⁴. We chose the most liquid series for companies with more than one stock series. Total Risk (TR) is calculated as the annualised standard deviation of daily stock returns over the last year. Daily returns ($r_{i,t}$) are measured as $(P_{it} - P_{it-1})/P_{it-1}$, where P_{it} is the stock price for firm i on day t . All prices are denominated in US dollars, and returns are adjusted for dividends and stock splits. Idiosyncratic Risk (IR) is calculated as the annualised standard deviation of residuals from the Market Model over the last year. We estimated this model as $R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$, where R_{it} is the stock return for firm i for period t , R_{mt} is the market portfolio return for period t , α_i is the constant term, β_i is a measure of stock price sensitivity for firm i to movements in the market, and ε_{it} is the error term. As do Figlioli and Lima (2019) and González-Sánchez (2022) we use the main equity market index as a market portfolio: Argentina (Merval), Brazil (Ibovespa), Chile (IPSA), Colombia (IGBC), Mexico (IPC), and Peru (S&P/BVL Peru General).

All CEO characteristic variables have been obtained through a systematic process. First of all, we obtain the CEO's name from annual reports for each company-year. We then use annual reports, corporate press releases, or corporate websites to determine the CEO's age, tenure, gender, duality, educational background, and nationality. In cases where the CEO has previously worked at the company in the same position, we measure tenure as the cumulative time in the position. If it is impossible to obtain that information, we turn to Refinitiv Eikon or the Bloomberg website, or we search on business press websites. In this case, we need three different websites that confirm the information, and none that mention otherwise. To obtain the CEO's master's degree in management (if they have one), we also check LinkedIn. When identifying the CEO's gender, we rely on their first name.

⁴ We additionally eliminate days with stock trade less than US\$100.

Finally, we drop the observation if we cannot identify this information. Our final sample includes 879 unique CEOs and an average of 4.49 CEOs per company.

CEO Age is measured in years. CEO Tenure is the number of years the CEO has served as the firm's CEO. Female CEO is a dummy variable that takes the value of 1 if the CEO is female, and 0 otherwise. CEO Duality is a dummy variable that takes the value of 1 if the CEO is also the Chairman of the Board, and 0 otherwise. To measure the level of education –CEO Master– we use a dummy variable that takes the value of 1 if the CEO has a master's degree in finance, business, economics, or administration, and 0 otherwise.⁵ Foreign CEO is a dummy variable that takes a value of 1 if the CEO is foreign, and 0 otherwise. In line with Antia et al. (2010), we measure CEO Career Horizon as $(\text{CEO Tenure}_{\text{ind } t} - \text{CEO Tenure}_{i t}) + (\text{CEO Age}_{\text{ind } t} - \text{CEO Age}_{i t})$, where $\text{CEO Tenure}_{\text{ind } t}$ is the industry median of tenure in year t , $\text{CEO Tenure}_{i t}$ is the tenure of the CEO's company i in year t , $\text{CEO Age}_{\text{ind } t}$ is the industry median of age in year t , and $\text{CEO Age}_{i t}$ is the age of the CEO's company i in year t . We use the NAICS code to define the industry. Finally, we use Hofstede's (2001) Uncertainty Avoidance Index (UAI) to measure the CEO's country risk aversion. On a scale of 1-100, the UAI measures the society's tolerance of uncertainty and resistance to the unknown.

We include a series of control variables that could influence corporate risk. ROA is the ratio of net income to total assets. We propose a negative relationship, since non-profitable companies have incentives to undertake riskier projects in order to make up for low profitability (Martino et al., 2020). Size is the natural logarithm of total assets. Larger companies have more resources and greater access to better sources of financing to diversify into unrelated sectors, such that we expect a negative relationship with corporate risk-taking (Anderson & Reeb, 2003). LEV is the ratio of total debt to total assets. Boubaker et al. (2016) state that financial

⁵ Unlike Beber and Fabbri (2012) and Bertrand and Schoar (2003), our business background includes not only an MBA but also other master's degrees that provide knowledge to control financial decisions, such as a master's degree in finance, business, economics, or administration.

leverage is associated with higher volatility and, therefore, a higher level of risk. Age is the natural logarithm of years after the foundation of the company. We expect a negative relationship, since older companies invest more in stable and conservative projects than younger companies (Anderson et al., 2012). Finally, CAPEX is the ratio of capital expenditures to total assets. CAPEX is usually associated with investments with low volatility. Therefore, we propose a negative relationship. Table 4 summarises the variables included in the estimates. All continuous variables are winsorized at 1% in both tails to mitigate the influence of outliers.

Table 4. Definition of variables

Abbreviation	Variables	Measure	Source
Dependent variables (Risk)			
TR	Total Risk	Annualised standard deviation of daily stock returns	Refinitiv Eikon
IR	Idiosyncratic Risk	Annualised standard deviation of residuals from the Market Model	Refinitiv Eikon
CEO characteristics variables			
CEO Age	CEO Age	Age of the CEO	Hand collected from annual reports, corporate websites, corporate press releases, Refinitiv Eikon website, Bloomberg website, LinkedIn, and business press websites.
CEO Tenure	CEO Tenure	Number of years the CEO has been serving as the company's CEO	
Female CEO	Female CEO	Dummy variable that takes value 1 if the CEO is female, and 0 otherwise	
CEO Duality	CEO Duality	Dummy variable that takes value 1 if the CEO is also the Chairman of the Board, and 0 otherwise	
CEO Master	Management Master	Dummy variable that takes value 1 if the CEO has a master degree in finance, business, economics, MBA, or administration, and 0 otherwise	
Foreign CEO	Foreign CEO	Dummy variable that takes value 1 if the CEO is foreign, and 0 otherwise.	
CEO Career Horizon	CEO's Career Horizon	$(\text{CEO tenure}_{\text{ind},t} - \text{CEO tenure}_{i,t}) + (\text{CEO age}_{\text{ind},t} - \text{CEO age}_{i,t})$	
CEO UA Index	CEO's country risk aversion risk	Uncertainty avoidance index of the CEO's country of origin	
Firm-level control variables			
ROA	Profitability	Ratio of net income to total assets	Refinitiv Eikon
Size	Size	Natural logarithm of total assets	Refinitiv Eikon
Lev	Financial leverage	Ratio of total debt to total assets	Refinitiv Eikon
Age	Age of the company	Natural logarithm of years after the foundation of the company	Refinitiv Eikon or hand collected from annual reports
CAPEX	Capital expenditures	Ratio of capital expenditures to total assets	Refinitiv Eikon

2.4. Results and analysis

2.4.1. Results

Table 5 presents the mean, standard deviation, minimum and maximum, as well as the 25th, 50th, and 75th percentiles. Our results are comparable with previous evidence for Latin America. Average TR is equal to 0.384 –similar to Poletti-Hughes and Briano-Turrent (2019)– while the average IR is 0.301. Average CEO Age, CEO Tenure, CEO Master, and Foreign CEO are 54.001 years, 8.678 years, 47.8%, and 13.2%, respectively. These results are comparable with the average values reported by Briano-Turrent et al. (2020) and González and González-Galindo (2022). Average CEO Duality is 22.1%, which lies between the proportions reported by Briano-Turrent and Poletti-Hughes (2017), Cueto (2013) and Gaitán et al. (2018). The average Female CEO presence of 3.2% is slightly lower (4.0%) than found by Gallego and Larrain (2012). Average CEO Career Horizon is -3.310, which means that the CEO's expected tenure is lower than the industry median. The average CEO UA Index is 83.412, meaning that most CEOs were born in conservative, change-averse or innovation-averse countries that have rigid rules. On average, profitability (ROA) is 8.7%, size (Size) is 14.466 (equal to 1,916 million dollars), financial leverage (Lev) is 54.2%, company age (Age) is 3.801 (equivalent to 44.75 years), and capital expenditures (CAPEX) is 6.2%, which are consistent with some recent Latin American studies (Briano-Turrent & Rodríguez-Ariza, 2016; Correa-Garcia et al., 2020; Mardones, 2022; Mellado & Saona, 2020).

Table 6 reports the correlation matrix. All control variables note a significant relationship with the two risk-taking measures, which justifies their inclusion in the regression models. We found no high correlations between the independent variables, except for the correlations between CEO Age, CEO Tenure, and CEO Career Horizon. Statistically, older CEOs are more likely to have longer tenures and shorter career horizons. Therefore, we do not jointly include these three

measures in the regression models. In turn, multicollinearity should not be a major issue in our estimations and in fact we also estimate the Variance Inflation Factor (VIF) to test for the absence of multicollinearity. All regressions present a VIF post-estimation test of below 2.

Table 5. Descriptive statistics

Variables	Mean	Std. Dev.	Min	Max	Quartiles		
					q25	q50	q75
TR	0.384	0.156	0.163	0.890	0.268	0.342	0.490
IR	0.301	0.132	0.139	0.866	0.297	0.301	0.376
CEO Age	54.001	8.919	33.345	77.016	48.616	52.761	60.001
CEO Tenure	8.678	8.945	0.130	37.942	2.176	5.553	12.699
Female CEO	0.032	0.181	0	1	0	0	0
CEO Duality	0.221	0.409	0	1	0	0	0
CEO Master	0.478	0.521	0	1	0	0	1
Foreign CEO	0.132	0.339	0	1	0	0	1
CEO Career Horizon	-3.310	14.540	-57.732	29.789	-10.570	-0.691	6.544
CEO UA Index	83.412	6.630	23.000	98.000	82.000	86.000	86.000
ROA	0.087	0.079	-0.168	0.399	0.041	0.079	0.122
Size	14.466	1.501	10.041	17.904	13.099	14.566	15.338
Lev	0.542	0.175	0.166	0.941	0.420	0.559	0.688
Age	3.801	0.768	0.138	5.581	3.291	3.932	4.467
CAPEX	0.062	0.049	0.001	0.269	0.026	0.051	0.081

The number of observations is 3,949.

Table 6. Correlation matrix

Variables	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)		(10)		(11)		(12)		(13)		(14)		(15)
(1) TR	1.000																												
(2) IR	0.904	***	1.000																										
(3) CEO age	-0.011		-0.021		1.000																								
(4) CEO tenure	-0.037	*	-0.039	**	0.471	**	1.000																						
(5) Female CEO	-0.050	**	-0.042	*	-0.096	**	-0.050	1.000																					
(6) CEO duality	0.209	**	0.159	***	0.226	**	0.333	***	0.003	*	1.000																		
(7) CEO master	-0.012		-0.019		-0.142	***	-0.145	***	-0.031		-0.036	*	1.000																
(8) Foreign CEO	-0.024		-0.028		-0.079	***	-0.241	***	-0.025		-0.039	*	0.058	***	1.000														
(9) Career horizon	0.028		0.037	**	-0.837	***	-0.844	***	0.084	***	-0.322	***	0.186	**	0.183	***	1.000												
(10) CEO UA index	0.022		0.013		-0.022		0.074	***	0.036	*	0.027		0.047	**	-0.356	***	-0.017		1.000										
(11) ROA	-0.114	***	-0.188	**	0.087	***	0.103	***	0.049	**	0.060	***	-0.059	***	0.007	-0.111	***	0.005		1.000									
(12) Size	-0.329	**	-0.468	***	0.053	**	0.012		-0.150	***	-0.064	***	0.095	***	0.109	***	-0.021		-0.161	***	-0.014		1.000						
(13) Lev	0.102	***	0.104	**	-0.139	***	-0.028	*	-0.038		0.022		0.078	***	-0.079	***	0.103	***	0.074	***	-0.198	***	0.220	***	1.000				
(14) Age	-0.063	**	-0.045	**	0.112	***	0.108	***	0.003	*	-0.078	**	0.041	***	-0.129	***	-0.071	**	0.060	***	-0.036	**	0.052	**	0.012		1.000		
(15) CAPEX	-0.010		-0.076	**	-0.053	***	-0.027		-0.029		-0.009	*	-0.059	**	0.057	***	0.026		-0.098	***	0.176	**	-0.005		-0.058	***	-0.102	***	1.000

This table presents the correlation coefficients ***, **, * for 1%, 5% and 10% significance levels. The number of observations is 3,949

We now examine the association between a CEO's characteristics and corporate risk-taking using the GMM technique to estimate equation (1). In Table 7, we report the results concerning the CEO's age and tenure. In Columns 1 and 3, we use the Total Risk (TR) measure, while in Columns 2 and 4, we use Idiosyncratic Risk (IR). Columns 1 and 2 show a non-linear, inverse U-shaped relationship between corporate risk-taking and CEO Age. On the one hand, the linear coefficients of CEO Age are positive and significant at the 1% level. On the other hand, the quadratic coefficients of CEO Age are negative and significant at the 1% level. As a result, we confirm the decrease in risk aversion of younger CEOs and the increase in the conservatism of older CEOs as they age, with the inflexion point being between 45 and 46 years.⁶ We use the Lind and Mehlum (2010) test to check the non-monotonic relationship. Furthermore, at CEO Age levels close to the mean (54 years), the marginal effect is around -0.0016 (Column 1) and -0.0009 (Column 2), which is economically significant.⁷ ⁸ In other words, a one standard deviation increase in CEO Age is associated with a 9.15% (6.08%) decrease in the standard deviation of TR (IR).⁹

Columns 3 and 4 report the estimates of CEO Tenure. We find that the linear (quadratic) coefficient of CEO Tenure is negative (positive) and statistically

⁶ We estimate the extreme point by equaling the first derivative of corporate risk-taking to zero with respect to CEO Age: $\frac{\partial TR}{\partial CEO\ Age} = \beta_1 + 2 \times \beta_2 \times CEO\ Age$. For instance, Column 1 would be expressed as $\frac{\partial TR}{\partial CEO\ Age} = 0.0083639 - 2 \times 0.0000919 \times CEO\ Age = 0$. Thus, solving for CEO Age, the extreme point is approximately 45.50 years. We use the same procedure for the other quadratic terms.

⁷ In order to measure the economic magnitude of the model coefficients, we scaled by the standard deviation of the dependent variable instead of the mean. See Mitton (2022) for more details.

⁸ The marginal effect is calculated by using the equation of the first derivative of corporate risk-taking with respect to CEO Age. For example, for Column 1 the marginal is: $\frac{\partial TR}{\partial CEO\ Age} = 0.0083639 - 2 \times 0.0000919 \times 54.001 = -0.0016$, where 54.001 is the mean CEO Age. We use the same procedure for the other quadratic terms.

⁹ This value is calculated as the ratio of the coefficient of the marginal effect of CEO Age multiplied by the standard deviation of CEO Age relative to the standard deviation of Total Risk: $9.15\% \left(\frac{-0.0016 \times 8.919}{0.156} \right)$.

significant at 1%, thus supporting a U-shaped relationship between CEO Tenure and corporate risk-taking. According to our estimates, the inflexion point of the relation is around 17 years. The Lind and Mehlum (2010) test confirms the non-monotonic relationship. Based on the mean of CEO tenure (8.678 years), the marginal effect is -0.0078 in Column 3, and -0.0054 in Column 4. These results are economically significant. It means that a one standard deviation change in CEO Tenure implies a 44.95% (36.86%) standard deviation decrease in TR (IR). These results are consistent with the idea that short-tenured CEOs at first increasingly avoid risk. Nevertheless, long-tenured CEOs have increasingly more specific knowledge and social ties, which leads to greater firm riskiness.

Table 7. CEO Age, CEO Tenure and Corporate Risk-Taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR
CEO Age	0.0084 *** (0.0023)	0.0055 *** (0.0020)		
CEO Age ²	-0.0001 *** (0.0000)	-0.0001 *** (0.0000)		
Extreme point CEO Age	45.4960 ***	46.0432 **		
CEO Tenure			-0.0160 *** (0.0027)	-0.0112 *** (0.0019)
CEO Tenure ²			0.0005 *** (0.0001)	0.0003 *** (0.0001)
Extreme point CEO Tenure			17.0532 ***	16.9178 ***
ROA	-0.1647 *** (0.0125)	-0.2458 *** (0.0207)	-0.1183 *** (0.0240)	-0.0608 *** (0.0168)
Size	-0.0643 *** (0.0026)	-0.0565 *** (0.0024)	-0.0569 *** (0.0059)	-0.0488 *** (0.0032)
Lev	0.0569 *** (0.0130)	0.0430 *** (0.0113)	0.0801 *** (0.0305)	0.1119 *** (0.0188)
Age	-0.0066 *** (0.0075)	-0.0206 *** (0.0032)	-0.0139 *** (0.0162)	-0.0305 *** (0.0124)
CAPEX	-0.0882 *** (0.0185)	-0.2446 *** (0.0217)	-0.1029 *** (0.0383)	-0.2347 *** (0.0348)
Constant	0.9907 *** (0.0716)	0.8635 *** (0.0656)	1.0502 *** (0.1005)	1.0647 *** (0.0632)
Observations	3,949	3,949	3,949	3,949
AR(2) p-value	0.39	0.58	0.13	0.20
Hansen test (χ^2)	188.88	186.11	146.96	150.42
F-test	5,016.0 ***	3,099.1 ***	274.70 ***	167.75 ***
Lind-Mehlum CEO Age	2.62	2.01		

Lind-Mehlum CEO Tenure	4.51	4.26
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Estimated coefficients (standard errors) from equation 1 using the two-step system GMM. ***, **, and * for 1%, 5%, and 10% significance levels. All the regressions include country, time and industry dummy variables. AR(2) is a test for second-order serial correlation. Hansen is the test of over-identifying restrictions. F-stat is a test for the joint significance of the independent variables.

Table 8 reports the estimates of the remaining relationships. The estimates for Female CEOs are negative and statistically significant, irrespective of the measure of risk used. In terms of economic significance, companies with a Female CEO are associated with a 67.18% (46.44%) standard deviation decrease in TR (IR). We thus confirm that female CEOs take less risk than their male counterparts. In Columns 3 and 4 of Table 8, we report a positive and significant relationship between CEO Duality and corporate risk-taking. The magnitude of the relationship is by no means trivial. Firms have a 53.97% (17.50%) standard deviation increase of TR (IR) when the same person holds the CEO and Chairman of the Board positions. Our evidence suggests that the concentration of power in the hands of a single executive supports risky decision-making. The estimates in Columns 5 and 6 are related to the CEO's educational background. The coefficients of CEO Master are positive and statistically significant. Having a CEO with a master's degree in business leads to a 45.06% (26.06%) change in the standard deviation of TR (IR). Therefore, the CEO's education is positively related to risk because CEOs with a business-related master's degree can better manage risky decisions. The last results of Table 8 are related to CEO culture. The coefficient of Foreign CEOs is positively related to corporate risk-taking. These results are statistically and economically significant. Companies with a foreign CEO are associated with an 88.72% (55.61%) standard deviation increase in TR (IR).

The coefficients of the control variables are consistent with previous literature. Except for firm age in Columns 1 and Column 3, all the control variables are statistically significant. ROA has a significant negative impact on risk measures since unprofitable firms might invest in risky projects in an effort to improve their

financial performance. Size is mainly negatively related to risk because large companies can diversify their activities to reduce risk. As expected, the relationship between risk and financial leverage (Lev) is positive. Finally, CAPEX is negatively related to TR and IR because companies decrease their risk by investing in low-risk projects, such as CAPEX investments, instead of projects with uncertain cash flow, such as R&D investments.

Table 8. Female CEO, CEO Duality, CEO Master, Foreign CEO, and Corporate Risk-Taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR	(5) TR	(6) IR	(7) TR	(8) IR
Female CEO	-0.1048 *** (0.0350)	-0.0613 ** (0.0268)						
CEO Duality			0.0842 *** (0.0151)	0.0231 ** (0.0109)				
CEO Master					0.0703 *** (0.0126)	0.0344 *** (0.0123)		
Foreign CEO							0.1384 *** (0.0215)	0.0734 *** (0.0145)
ROA	-0.1756 *** (0.0237)	-0.1066 *** (0.0155)	-0.1581 *** (0.0224)	-0.0943 *** (0.0146)	-0.1515 *** (0.0222)	-0.0962 *** (0.0162)	-0.1688 *** (0.0256)	-0.0937 *** (0.0177)
Size	-0.0664 *** (0.0050)	-0.0563 *** (0.0033)	-0.0585 *** (0.0056)	-0.0540 *** (0.0033)	-0.0650 *** (0.0051)	-0.0571 *** (0.0033)	-0.0682 *** (0.0052)	-0.0594 *** (0.0031)
Lev	0.0591 ** (0.0273)	0.1080 *** (0.0179)	0.0668 ** (0.0274)	0.1029 *** (0.0180)	0.0677 ** (0.0276)	0.1018 *** (0.0176)	0.0927 *** (0.0270)	0.1148 *** (0.0197)
Age	-0.0114 (0.0148)	-0.0258 ** (0.0119)	0.0068 (0.0142)	-0.0227 ** (0.0114)	-0.0248 * (0.0146)	-0.0284 ** (0.0116)	-0.0141 (0.0150)	-0.0276 ** (0.0116)
CAPEX	-0.0842 ** (0.0344)	-0.2496 *** (0.0351)	-0.0782 ** (0.0356)	-0.2480 *** (0.0352)	-0.1063 *** (0.0323)	-0.2524 *** (0.0339)	-0.0950 *** (0.0347)	-0.2288 *** (0.0359)
Constant	1.2226 *** (0.0873)	1.1770 *** (0.0552)	1.0631 *** (0.0920)	1.1459 *** (0.0577)	1.2506 *** (0.0887)	1.1858 *** (0.0582)	1.3099 *** (0.1019)	1.2234 *** (0.0649)
Observations	3,949	3,949	3,949	3,949	3,949	3,949	3,949	3,949
AR(2) p-value	0.18	0.43	0.22	0.41	0.14	0.43	0.23	0.53
Hansen test (χ^2)	155.78	154.87	157.17	155.80	149.86	161.75	149.18	153.23
F-test	344.60 ***	195.17 ***	323.49 ***	202.64 ***	486.93 ***	185.54 ***	420.56 ***	243.64 ***

Estimated coefficients (standard errors) from equation 1 using the two-step system GMM. ***, **, and * for 1%, 5%, and 10% significance levels. All the regressions include country, time and industry dummy variables. AR(2) is a test for second-order serial correlation. Hansen is the test of over-identifying restrictions. F-stat is a test for the joint significance of the independent variables.

All the models report the tests of joint validity of the selected instruments (Hansen test) and the test of second-order autocorrelation of the residuals. The Hansen test reports that instruments are exogenously determined. In addition, we present the p-value of AR(2), and we confirm the absence of second-order correlation with the

error term of the estimates. Finally, all the models report tests of the joint significance of coefficients (F test) at 1% level.

Table 9 presents two additional findings. Columns 1 and 2 test the relationship between CEO Career Horizon and corporate risk-taking. As do Antia et al. (2010), we use the industry-adjusted career horizon measure. The coefficients are positive and statistically significant, which means that CEOs who are about to retire or be dismissed, i.e. with a short career horizon, avoid risky projects for fear of losing their reputation (Chakraborty et al., 2007; McClelland et al., 2012). These results show that a one standard deviation increase in CEO Career Horizon increases the standard deviation of TR (IR) by 11.18% (14.32%).

Table 9. CEO Career Horizon, CEO UA Index and Corporate Risk-Taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR
CEO Career Horizon	0.0012 *** (0.0004)	0.0013 *** (0.0004)		
CEO UA Index			-0.0025 *** (0.0010)	-0.0017 *** (0.0006)
ROA	-0.1350 *** (0.0246)	-0.0695 *** (0.0173)	-0.1540 *** (0.0247)	-0.0899 *** (0.0158)
Size	-0.0621 *** (0.0049)	-0.0517 *** (0.0034)	-0.0632 *** (0.0054)	-0.0567 *** (0.0032)
Lev	0.0657 ** (0.0262)	0.1053 *** (0.0184)	0.0851 *** (0.0290)	0.1157 *** (0.0187)
Age	-0.0265 * (0.0147)	-0.0325 ** (0.0125)	-0.0101 (0.0158)	-0.0233 ** (0.0118)
CAPEX	-0.1238 *** (0.0376)	-0.2639 *** (0.0367)	-0.1279 *** (0.0384)	-0.2273 *** (0.0364)
Constant	1.2098 *** (0.0889)	1.1461 *** (0.0641)	1.3990 *** (0.1345)	1.3151 *** (0.0941)
Observations	3,949	3,949	3,949	3,949
AR(2) p-value	0.28	0.31	0.12	0.35
Hansen-Test	154.10	155.37	152.09	157.79
F-test	462.27 ***	150.44 ***	413.86 ***	207.95 ***

Estimated coefficients (standard errors) from equation 1 using the two-step system GMM. ***, **, and * for 1%, 5%, and 10% significance levels. All the regressions include country, time and industry dummy variables. AR(2) is a test for second-order serial correlation. Hansen is the test of over-identifying restrictions. F-stat is a test for the joint significance of the independent variables.

We go one step further and examine what impact the culture of the CEO's nationality has on corporate risk. For this purpose, we focus on the UAI proposed by Hofstede (2001). Managers in countries with high UAI are afraid of the consequences of failure (Mihet, 2013) and do not want to jeopardise their source of wealth (Kanagaretnam et al., 2011). Columns 3 and 4 of Table 9 show that the CEO UA Index is negative and statistically significant. CEOs from countries with high UAI prefer to make less risky decisions. It should be noted that Latin American cultures have high rates of uncertainty avoidance and a low tolerance for the unknown (Boubakri & Saffar, 2016; Sacristán-Navarro et al., 2022). An increase in CEO UAI from the 25th percentile to the 75th percentile is associated with a 6.41% (5.15%) standard deviation decrease in TR (IR).

2.4.2. Analysis and discussion

This paper aims to disentangle the impact of the most controversial CEO variables on corporate risk-taking. We find evidence to support the idea that a CEO's characteristics have a strong explanatory power on financial outcomes. Our main results reject prior evidence that CEO age and CEO tenure have a linear relationship with corporate risk-taking.

We first confirm the idea that in the case of younger CEOs, ageing increases risk because they have better cognitive abilities to manage risky financial decisions. In addition, younger CEOs are willing to signal to the market their ability to manage risky projects (Farag & Mallin, 2018; Peltomäki et al., 2021; Zhang et al., 2016). However, CEOs may start worrying about their retirement and avoid reputation-ruining risks at a specific time. Therefore, among old CEOs, ageing increases the desire to maintain the status quo in their professional careers. Our second results report a U-shaped quadratic relationship between CEO tenure and corporate risk-taking. Although new CEOs arrive with fresh ideas, they are afraid of jeopardizing their main source of wealth and are concerned that their specific knowledge may be obsolete. However, as the years go by, this relationship becomes positive because

the CEO has more and more experience and has already earned the trust of the board of directors and shareholders. In this sense, long-tenured CEOs have more specific social networking ties, experience and knowledge that allows them to make riskier decisions (Naseem et al., 2020).

In addition, we study other CEO characteristics that might impact corporate policy riskiness. The evidence in Table 8 concerning Hypothesis 3 partially confirms the results of Datta et al. (2021), Faccio et al. (2016) and La Rocca et al. (2020), who point out that female CEOs are more conservative and less overconfident than male CEOs. Faccio et al. (2016) add that female CEOs undertake sub-optimal risky projects because it is more difficult for women to find senior management positions. Similarly, La Rocca et al. (2020) indicate that female CEOs prefer financial decisions which are related to lower risk, such as short-term debt financing. Therefore, we believe there are gender-based decision-making differences which affect corporate risk. We also find evidence regarding the positive relationship between CEO duality and corporate risk-taking (Hypothesis 4), which could be the result of duality endowing the CEO with the freedom and confidence to mitigate suboptimal risk-taking decisions. Our empirical results also add evidence to the scarce literature on CEOs' education and firm outcomes and show that holding a master's degree in business-related topics is positively associated to corporate risk-taking. Farag and Mallin (2018), King et al. (2016), and Naseem et al. (2020) confirm that CEOs with a specialized educational background in business play a key role in risky corporate decision-making because they are more receptive to innovation projects and have accumulated more knowledge. As regards the impact of CEO nationality, we show that foreign CEOs –unlike domestic CEOs– have more knowledge and better financing conditions that allow them to participate in risky projects. Therefore, we report that CEO nationality significantly influences corporate risk-taking. These results concur with Kim et al. (2020) and Li, Griffin, et al. (2013), who find that a country's cultural factors –and in particular uncertainty

aversion– impact risky corporate decision-making. We thus confirm that the culture of the CEO's country of origin does indeed matter.

We also report some additional results concerning a CEO's career horizon using an industry-adjusted measure (Hypothesis 7). Our results confirm that the relationship between the CEO's career horizon and the company's risk-taking is conditional on the dynamism of the company's industrial sector (Antia et al., 2010; McClelland et al., 2012). We also show that myopic CEOs with short careers tend to prefer short-term projects with faster returns. For instance, Matta and Beamish (2008) report that CEOs who are approaching retirement avoid risky decisions such as international acquisitions in order not to jeopardize their reputation. These suboptimal risk-taking decisions are due to the fact that the CEO's horizon is shorter than the company's life (Antia et al., 2010).

2.5. Conclusions, contributions, implications, and future research possibilities

2.5.1. Main findings

We have developed an empirical framework to disentangle the effects of CEOs' observable traits on corporate risk-taking in Latin American companies. Our first finding indicates that the relationship between CEO age and risk-taking is non-linear and inverted U-shaped. This result means that ageing improves the ability of younger CEOs (who are under 45 years of age) to learn and adapt quickly to complex environments but that it causes a greater preference for the status quo among older CEOs. The second set of results shows that the relationship between CEO tenure and risk-taking is also non-linear but U-shaped. In other words, as tenure increases, young CEOs become more entrenched and avoid risky decisions. Nevertheless, when CEO tenure reaches a threshold (around 17 years), the benefits of long tenure outweigh the costs, and risk-taking increases.

We also find that CEO gender matters in risk-taking, such that female CEOs take fewer risks than their male counterparts. Furthermore, our results show that when the CEO holds the Chairman of the Board position or has a business-related master's degree, the risk of the firm increases. We document that foreign CEOs take riskier decisions. We further analyse this relationship in the cultural framework and find that CEOs from countries with greater uncertainty avoidance take less risky decisions. Finally, our evidence highlights the relevance of career horizon because it shows that CEOs nearing retirement are more risk-averse.

2.5.2. Contributions

Our research makes a number of contributions. First, on the theoretical side, our results lend support to the Upper Echelon Theory. Taken together, our results challenge the classical theory that CEOs are homogenous individuals who do not have the power to influence the company's financial decisions. In turn, we complement the dominant agency theory approach and show that a CEO's observable characteristics have explanatory power vis-à-vis corporate risk-taking.

Second, by using a hand-collected dataset of 879 unique CEOs and 369 non-financial firms from six Latin-American countries, we expand the literature, which has mostly focused on other contexts. This region is characterised by a high concentration of ownership –mainly in the hands of families– and weak investor protection. In turn, our results shed light on a number of emerging countries to which prior research has paid scant attention. Third, we contribute to the debate on the effect of two closely related CEO traits: age and tenure. Whereas longer tenure has usually been associated with older age, we introduce a non-linear specification and find that CEO age and CEO tenure affect risk-taking in opposite directions. Therefore, we refine the measure of CEO traits by showing that CEO age and CEO tenure are not two sides of the same coin but complementary sides of the same person. Fourth, our research also makes a methodological contribution since we use different market-based measures of risk-taking. In turn, we use an external measure

of corporate risk-taking that cannot be managed directly by the CEO and is assessed by capital market participants.

2.5.3. Implications

Our work could offer helpful clues to researchers, practitioners, and policymakers alike. Academics and researchers may be interested in understanding the relationship between CEO characteristics and firm risk and in this regard, we provide them with some fresh evidence in the context of emerging economies. In so doing, we shed some light on the little-known debate concerning what impact CEO profile has on organisational outcomes in the Latin American context. We also provide evidence on the profile of the CEO, who is most likely to have myopic risk aversion or to generate managerial entrenchment.

At the same time, our results should be welcomed by shareholders, practitioners and participants in capital markets since we uncover some mechanisms which they can use to improve corporate governance and to promote risky but profitable financial decisions. In an environment of concentrated ownership, large dominant shareholders must develop an optimal governance structure in which the interests of all stakeholders are aligned. Our results provide valuable information regarding the profile of the CEO who does not take under-optimal risks.

All of this evidence can also be helpful to policymakers, who can find in our research some guidelines to improve codes of good governance. Most of these codes are inspired by the "comply-or-explain" principle. Thus, legal and financial authorities could improve the risk appetite or moderate corporate risk-taking by suggesting the optimal profile of firms' decision-makers so as to attain the right level of corporate risk. Moreover, given the importance of CEOs' personal traits, corporate report content could be redefined in order to provide some additional information on top managers.

2.5.4. Directions for future research

Our work is not without limitations, such that further research is needed in the future. Several variables may play a mediating role between CEO traits and risk-taking. For example, compensation can alleviate managerial risk aversion and could be taken into account in future research (Blanes et al., 2020; McClelland et al., 2012; Rehman et al., 2021). Another direction is the interaction between managerial traits and governance structures such as ownership structure, the board of directors, etc. Some studies might therefore address whether the relationship between risk-taking and CEO traits is affected by ownership concentration, large shareholder identity, or the composition of the board of directors. For example, CEOs in family firms are a key issue, such that it is necessary to investigate the impact of CEO profile that encourages corporate risk-taking in this type of firm. Furthermore, we only analyse corporate risk-taking, yet this decision must be looked at together with performance. In turn, another promising topic would be to examine whether more risk-taking by certain CEOs also translates into greater corporate profitability. Finally, the international framework could be expanded by considering some legal and institutional characteristics of each country (in addition to uncertainty aversion), such as the protection of investors' rights or the society's long-term orientation.

CAPÍTULO 3: Control contestability, large shareholder identity, and corporate risk- taking: International evidence

CAPÍTULO 3

Control contestability, large shareholder identity, and corporate risk-taking: International evidence

3.1 Introduction

Recent empirical evidence has challenged the traditional belief concerning the dispersion of ownership structure and has shown that corporate ownership concentration is widespread (Chen, Wei, et al., 2022; Faccio & Lang, 2002; Gugler et al., 2014; Holderness, 2009). Furthermore, the most common characteristic of ownership concentration is the presence of multiple large shareholders (henceforth MLS) –an intermediate situation between dispersed ownership and concentration in the hands of a single dominant shareholder (Attig et al., 2008; Edmans & Manso, 2010; Laeven & Levine, 2008). In response to this phenomenon, a growing number of studies on MLS have analysed the effect on various issues such as firm value, choice of debt source, financial leverage, debt maturity, or corporate investment (e.g., Barroso Casado et al., 2016; Ben-Nasr et al., 2015; Boateng & Huang, 2017; Boubaker et al., 2017; Jiang et al., 2018; Lei & Deng, 2014). Nevertheless, although some authors have explored the relationship between MLS and corporate risk-taking, the topic still demands further research.

The underlying logic is that not all shareholders have the ability to shape the riskiness of the firm. Boubaker et al. (2016), Mishra (2011), and Nguyen (2011) show that large non-controlling shareholders (henceforth LNCs) –unlike minority shareholders– have the incentives and the voting power to implement risky financial policies, thereby counteracting possible myopic managerial risk aversion. In turn, the presence, identity, and voting power of large shareholders is a key factor in understanding how ownership structure affects firm risk-taking (Boubaker et al.,

2016; Claessens et al., 2002; Gutiérrez & Pombo, 2009).

LNCSSs may both cooperate with or challenge the controlling shareholder. From this standpoint, the presence of MLS acts as a twofold mechanism: on the one hand, it can counterbalance the conservative behaviour of the controlling shareholder while, on the other hand, some large shareholders might form a control coalition and use corporate risk-taking to extract private benefits at the expense of minority shareholders (Attig et al., 2008; García-García et al., 2020; Maury & Pajuste, 2005; Pombo & Taborda, 2017).

In this paper, we aim to assess the extent to which large shareholders (both controlling and non-controlling) can influence corporate risk-taking. We therefore attempt to answer the following research questions: 1) Is the identity of the controlling shareholders a source of heterogeneity that explains corporate risk-taking? 2) Are LNCSSs an effective internal governance mechanism to counteract controlling shareholder preferences? 3) Under which conditions do these non-controlling shareholders collude or contest the controlling shareholder through the risk-taking policy?

We analyse a sample of 209 firms from Chile, Colombia, Mexico, and Peru belonging to the Latin American Integrated Market (Spanish acronym -MILA)¹⁰ between 2005 and 2020. Our focus on emerging markets stems from the growing importance of the MILA and the relevance of MLS in company governance in these economies (e.g., Berggrun et al., 2020a, 2020b; Berggrun et al., 2016; Correa-Garcia et al., 2020; Mellado & Escobari, 2015; Mongrut & Winkelried, 2019). MILA members are characterized by a predominant presence of principal-principal agency problems and weak investor protection, such that controlling shareholders might take advantage of their power to pursue private benefits. Although the

¹⁰ MILA is the first integration agreement to combine the stock market and central repository of securities of different countries while maintaining the autonomy of local regulators (Espinosa-Méndez et al., 2017; Hardy et al., 2018).

presence of MLS is a well-documented ownership structure in the Latin American context, nothing has yet been said about MLS as drivers of corporate risk-taking in this environment. (Cueto, 2013; De-la-Hoz & Pombo, 2016; Gonzalez et al., 2017; Pombo & De La Hoz, 2021; Pombo & Taborda, 2017).

Our baseline result shows the influence of large shareholders on corporate risk-taking, with this influence being conditional on the identity of the shareholder. We find that families or governments (foreign investors) as controlling shareholders are negatively (positively) associated with corporate risk-taking. Interestingly, we find that LNCSS make up for the risk aversion of managers and the largest controlling owner, promoting riskier corporate policies. We also focus on family-controlled firms and study the governance role played by the different types of LNCSS. According to our results, family investors as the second largest shareholders are associated with a suboptimal risk policy, whereas corporate risk-taking increases if the second largest shareholder is an institutional investor. Our results thus highlight the heterogeneity within large shareholders and the bivalent relationship between controlling and non-controlling large shareholders.

Our study contributes to the literature in different ways. First, we present new evidence about the role of MLS as an effective mechanism for mitigating agency conflicts in a poor external governance context. Moreover, we categorize large shareholders and identify the different types of coalitions that might exist among them. Our results support the argument of Boubaker et al. (2016) and Mishra (2011) that large shareholders –other than controlling shareholders– agree to avoid projects that are too low-risk and enhance firm value. Additionally, we categorize large shareholders in an effort to identify the different types of coalitions formed between them.

Second, we extend the literature on the monitoring efficiency of MLS of family-controlled firms. We confirm the idea that family shareholders are undiversified and risk-averse investors. However, LNCSS can use their voting power to

counteract the conservative decision-making of family-controlled firms. In this respect, we show that some LNCs collude with the controlling shareholder to share the private benefits of suboptimal risky policies.

Third, considering the particularities of the Latin American market, we carefully identify the presence, identity, and voting power of large shareholders from firms and other public sources. Since pyramidal structures are a common control-enhancing mechanism in emerging markets, we draw the ownership structure to find the ultimate shareholder of every firm. We also look inside the different branches of the same family, shareholder agreements, and joint-voting arrangements in an attempt to build a unique and hand-collected dataset of ownership structure –which may also be viewed as a valuable contribution.

Fourth, we use market-based risk-taking variables to capture the riskiness of the firm. Prior research has used accounting measures, such as firm performance deviation (Boubaker et al., 2016; Faccio et al., 2011; John et al., 2008; Mishra, 2011) or insolvency risk, such as the Z-score (Llanos-Contreras et al., 2021; Zhang & Luo, 2021). In contrast, our measures are likely to better capture market assessment of risk-taking policies.

The rest of the paper is structured as follows. Section 2 presents an overview of the literature and proposes the hypotheses. The sample, sources of information, variables, and methodology are described in Section 3. Section 4 presents our empirical results and the discussion. Section 5 provides the conclusion, contributions, implications, and suggestions for future research.

3.2 Literature review

3.2.1 Identity of large shareholders

Controlling shareholders have the power to shape financial decisions according to their risk preferences (Faccio et al., 2011). Nevertheless, there is no

single type of controlling shareholder investor profile since the latter may have different beliefs, governance styles, risk preferences, and skills and may therefore adopt different risk-seeking attitudes, such that their identity plays a key role in financial policies (e.g., Boubaker et al., 2016; García-García et al., 2020; Mishra, 2011). The literature has studied the impact of several types of controlling shareholders: families, foreign investors, institutional investors, and governments (Claessens et al., 2002; Faccio & Lang, 2002; La Porta et al., 1999; Pombo & Taborda, 2017).

Families are usually undiversified investors that pay particular attention to the intergenerational succession process and to family reputation, which results in the company overlooking some value-creating –albeit risky– projects (Boellis et al., 2016; Lim et al., 2010; Muñoz-Bullón & Sanchez-Bueno, 2011; Xu et al., 2023). In order to avoid jeopardizing the family’s wealth, family shareholders tend to take low-level risks and to deviate from optimal risk levels (Anderson et al., 2012; Naldi et al., 2007; Zhang & Luo, 2021). In contrast, foreign shareholders are seen as more risk-oriented and experienced investors that improve efficient governance by actively monitoring corporate decision-making as well as by guiding firms toward efficient investments (Agarwal & Chaudhry, 2022; Chen et al., 2017). In addition, these investors provide foreign and valuable resources and knowledge for better risk management (Choi et al., 2012). In fact, Boubakri, Cosset, et al. (2013) show that foreign ownership is positively related to corporate risk-taking in a sample of privatized firms.

Similarly, institutional investors have well-diversified portfolios, greater access to capital markets, knowledge, and incentives to encourage risk-seeking decisions (García-García et al., 2020; Kabir et al., 2020). In addition, they can effectively affect managerial decisions, both by direct monitoring (voice mechanism) or share trading (threat of exit) (Ferreira & Matos, 2008; Gillan & Starks, 2007; Ruiz-Mallorquí & Santana-Martín, 2011). In contrast, government-controlling

shareholders pursue political or social objectives that may conflict with the interests of the other shareholders (Lin et al., 2016). As a result, government-controlled firms are unlikely to make risky financial decisions that would jeopardize politicians' careers and chances of re-election (Boubakri, Cosset, et al., 2013). At the same time, state-owned firms have political and financial advantages, such that they have no incentive to undertake risky projects that could improve their competitive position (Vo, 2018).

Based on the above discussion, we anticipate that controlling shareholders' identity will play a key role in corporate risk-taking. Thus, our first hypothesis is as follows:

Hypothesis 1: Family-controlled and government-controlled firms are associated with lower corporate risk-taking, while foreign control and institutional-investor control have the opposite effect.

3.2.2 Presence of MLS

In their theoretical models, Bennedsen and Wolfenzon (2000) and Bloch and Hege (2001) conclude that optimal ownership structure occurs when there are several LNCS. These shareholders would form a controlling coalition to avoid the disadvantages of both a too-dispersed and a too-concentrated ownership structure. Shareholder coalitions are a two-fold mechanism since, on the one hand, shareholders can collude with each other to extract private benefits of control (the so-called coalition hypothesis) or, on the other hand, aggregate their voting power to improve the monitoring process –as explained by the monitoring hypothesis.

The empirical evidence lends support to the governance role of LNCS and the monitoring hypothesis. According to this literature, the presence and power of LNCSs can reduce agency problems by improving investment efficiency (Jiang et al., 2018), enhancing debt market discipline (Ben-Nasr et al., 2015; Boubaker et al., 2017), restraining tax avoidance (Ouyang et al., 2020), increasing R&D investment

(García-García et al., 2020), improving the value of cash holdings (Lin et al., 2016), and decreasing the controlling shareholder's excessive risk aversion (Boubaker et al., 2016; Mishra, 2011). These studies support the notion that LNCSs can form coalitions and reach the necessary voting power to block decisions that promote excessive consumption of private benefits by controlling shareholders (Attig et al., 2008). In this regard, the shareholders' coalition leads to higher levels of contesting control by internalizing the monitoring costs, thereby decreasing controlling shareholders' incentives to adopt a risk-averse attitude (Boubaker et al., 2016; Mishra, 2011).

The role of LNCS in guiding firms towards risky but value-enhancing strategies is especially relevant in family firms. The particularities of controlling families –lack of diversification, family self-interest, and focus on personal benefits– could enhance the diversion of the company's resources to low-risk projects as a channel for extracting wealth from minority shareholders (Boubaker et al., 2016; Tanyeri Günsür & Alp, 2023). LNCSs can counteract the dominant position of family controlling shareholders and are associated with a higher valuation in family firms (Sacristán-Navarro et al., 2015). Gutiérrez and Pombo (2009) and Pombo and Taborda (2017) substantiate the contribution of LNCS to firm value in Latin America.

In turn, corporate risk-taking depends not only on the identity of the largest shareholder (as hypothesized in H1) but also on the presence and power of other large shareholders, as we postulate in our second hypothesis:

Hypothesis 2: the presence and voting power of large non-controlling shareholders has a positive impact on corporate risk-taking, particularly in family-controlled firms.

3.2.3 Identity of LNCSs

The role of LNCSs not only depends on their presence or on the fraction of shares they own, since their identities may also be a key factor. Different types of shareholders can interact in different ways, such that LNCS effectiveness in monitoring the largest shareholder is contingent on their identity (e.g., Boubaker et al., 2016; García-García et al., 2020; Lin et al., 2016; Pombo & Taborda, 2017; Sacristán-Navarro et al., 2015). Following the monitoring vs. coalition hypotheses duality, we posit that the interaction between the controlling and the other large non-controlling shareholders is related to the latter's identity. On the one hand, the monitoring hypothesis states that LNCS may challenge the power of the controlling shareholder and block sub-optimal risk decisions. For its part, the coalition hypothesis argues that LNCSs may engage with the controlling shareholders to divert funds towards conservative decisions.

When LNCSs are of the same nature as the controlling shareholder, the risk of disagreement decreases, and the convergence of interests towards opportunistic behaviour can emerge more easily (Ducassy & Guyot, 2017; García-García et al., 2020; Lin et al., 2016). Attig et al. (2008) and Maury and Pajuste (2005) show that coalitions formed by a controlling family owner and other large family shareholders have negative consequences for firms, as they lead to a higher cost of capital and lower firm valuation. In other words, large shareholders of the same type are more likely to form rent-seeking coalitions. In the field of risk taking, this might mean that large shareholders of the same nature are more likely to form risk-averse coalitions.

Conversely, Boubaker et al. (2016) provide evidence that LNCSs which are different in nature to the controlling shareholder are less emotionally connected and more likely to undertake risky but profitable projects. Chen, Hobdari, et al. (2022) and Sacristán-Navarro et al. (2015) report that the particularities of institutional or foreign investors (e.g., diversified and knowledgeable investors) lead them to be

actively involved in family firms' risk-taking decision-making. In addition, family-controlled firms with LNCs that are different in nature are less likely to divert corporate resources towards conservative projects because of the higher risk of disagreement among large shareholders (Ducassy & Guyot, 2017).

In turn, we posit that identity heterogeneity between large controlling and non-controlling shareholders shapes their interaction and the incentives of non-controlling shareholders to either contest or align with the controlling shareholder, as stated in our third hypothesis:

Hypothesis 3: the identity of non-controlling large shareholders moderates the relationship between contesting control and corporate risk-taking.

3.3 Data, variables, and model

3.3.1 Sample and sources of information

We build an unbalanced panel data consisting of 209 firms belonging to the main stock exchanges of the MILA countries: Santiago Exchange (Chile), Colombia Securities Exchange (Colombia), Mexican Stock Exchange (Mexico), and Lima Stock Exchange (Peru). Since we focus on ownership structures with a controlling shareholder, we eliminate observations that lack a shareholder who owns at least 10% of voting rights. As is common in this kind of study, financial, non-domestic, and firms with negative equity are excluded. In order to address survivorship bias, we include both active and inactive firms. Panel A of Table 10 shows the sample composition. The dataset includes 2,085 firm-year observations between 2005 to 2020, with an average of 9.98 observations per firm. Chile and Mexico have the most significant participation in the sample, with 41.58% and 33.72%, respectively. Peru accounts for 15.68%, while Colombia reports the lowest observations, with 9.02%. Panel B of Table 10 shows the composition of the sample by country-year.

Table 10. Panel composition

Panel A: Composition of the sample by country-firms																	
Country	Obs.	(%)	Firms	(%)	Av. Obs. Per Firm												
Chile	867	41.58	82	39.23	10.57												
Colombia	188	9.02	21	10.05	8.95												
Mexico	703	33.72	75	35.89	9.37												
Peru	327	15.68	31	14.83	10.54												
Total	2,085	100	209	100.00	9.98												
Panel B: Composition of the sample by country-year																	
Country	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Chile	44	49	54	49	52	63	58	60	59	55	51	53	59	56	51	54	867
Colombia	2	2	4	9	11	17	17	15	15	14	12	14	13	14	14	15	188
Mexico	14	23	31	36	38	42	47	48	52	49	50	50	57	57	55	54	703
Peru	16	21	25	25	23	22	22	22	21	19	18	20	21	19	19	14	327
Total	76	95	114	119	124	144	144	145	147	137	131	137	150	146	139	137	2,085

The number of observations is 2,085.

Table 11 reports the distribution of firms by the two-digit North American Industry Classification System (NAICS) Code. Three industrial sectors are predominant: manufacturing (37.80%), utilities (11.48%), and retail trade (10.53%).

Table 11. Distribution of firms by two-digit NAICS Code

NAICS Sector Name	No. of firms	Percentage (%)
Agriculture, Forestry, Fishing, and Hunting	8	3.83%
Mining	15	7.18%
Utilities	24	11.48%
Construction	17	8.13%
Manufacturing	79	37.80%
Wholesale Trade	2	0.96%
Retail Trade	22	10.53%
Transportation and Warehousing	17	8.13%
Information	12	5.74%
Professional, Scientific, and Technical Services	1	0.48%
Administrative and Support and Waste Management and Remediation Services	1	0.48%
Health Care and Social Assistance	3	1.44%
Arts, Entertainment, and Recreation	5	2.39%
Accommodation and Food Services	3	1.44%
Total	209	100.00%

The number of observations is 2,085

The presence, voting rights, and identity of large shareholders were hand-collected using: i) annual reports compiled by the respective local regulatory entities¹¹, ii) US

¹¹ Comisión para el Mercado Financiero (Chile), Superintendencia Financiera (Colombia), Comisión Nacional Bancaria y de Valores (Mexico), and Superintendencia del Mercado de Valores (Peru).

Securities and Exchange Commission (SEC) Form 20F for companies with American Depositary Receipts (ADRs), and iii) corporate websites. Financial information was obtained from Refinitiv Eikon. We also hand-collected company age and CEO tenure from annual reports, SEC Form 20F, corporate websites, corporate press releases, or business press websites.

3.3.2 Risk measures

Following prior studies, we use two market-based risk measures to proxy corporate risk-taking: total risk and idiosyncratic risk (Ferreira & Laux, 2007; Lee et al., 2018; Low, 2009; Nguyen, 2011; Pathan, 2009; Peltomäki et al., 2021; Serfling, 2014). Total Risk (TR) is calculated as the annualized standard deviation of daily stock returns over the last year. To address the problem of low liquidity, we only use firm-year observations where stocks trade a minimum of 80% of business days in the year (Figlioli & Lima, 2019; Leite et al., 2018)¹². Daily stock returns ($r_{i,t}$) were measured as $r_{i,t} = (P_{it} - P_{it-1})/P_{it-1}$, where P_{it} is the stock price for firm i on day t . The price is denominated in U.S. dollars, and the returns are adjusted for dividends and stock splits¹³. Idiosyncratic Risk (IR) is calculated as the annualized standard deviation of residuals from the market model over the last year. We estimated this model as $R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$, where R_{it} is the stock return for firm i for period t , R_{mt} is the market portfolio return for period t , α_i is the intercept, β_i is a measure of stock price sensitivity for firm i to movements in the market, and ε_{it} is the error term. In line with previous work, we use the main stock market index as a market portfolio: Chile (IPSA), Colombia (IGBC), Mexico (IPC), and Peru (S&P/BVL Peru General) (Figlioli & Lima, 2019; González-Sánchez, 2022).

¹² For firms with more than one series of shares, we used the most liquid one.

¹³ We eliminate days when stock trading is less than US\$100.

3.3.3 Ownership structure measures

First of all, since large shareholders usually control the company indirectly through pyramid structures, we need to find the ultimate owner, drawing the ownership structure of each firm-year. In addition, a controlling shareholder is often a group of different branches of the same family or a group of powerful investors who have signed a shareholder agreement or joint-voting arrangement. In these cases, we compute the voting power of the controlling shareholder as the sum of the voting rights of relatives, associated investors, and other related parties.¹⁴ In line with previous work, we define the controlling shareholder as an investor who holds at least 10% of the company's voting rights (Attig et al., 2008; Gutiérrez & Pombo, 2009; Jiang et al., 2018; Mishra, 2011; Ouyang et al., 2020; Ruiz-Mallorquí & Santana-Martín, 2011).¹⁵ Otherwise, the company is classified as having dispersed ownership and is excluded from the sample. The minimum threshold of 10% ensures that controlling shareholders have a significant influence on the company's decision-making.

We categorize the identity of the large shareholder into five dummy variables: family, foreign, institutional, government, and other shareholders. First, for family investors (FAM), we consider that different family members may be involved in the firm's ownership through different firms. We therefore aggregate the percentage of voting rights held by individuals related to the family by blood and marriage. Second, we classify foreign investors (FOR) as those from a country of origin other than the firm. Third, we consider institutional investors (INST) as asset

¹⁴ For example, Falabella –a multinational department store company– is controlled by the Solari family and the Del Rio family. By 2020, the different branches of the Solari family (i.e., Karlezi Solari, Solari Heller, Cortes Solari, Solari Donaggio, Cuneo Solari, and Cardone Solari) held 55.35% of the company's voting rights, while the Del Rio family held 15.21%. Both families signed a shareholder agreement in 2013, where they formally committed to voting cohesively on the company's main policies in order to ensure control of the company. In this sense, we consider that the controlling shareholder has 70.56% and not 55.35%; since the two shareholders behave as one.

¹⁵ Regulatory entities usually require listed companies to disclose ownership data of shareholders who hold at least 10% of voting rights.

managers, banks, insurance companies, mutual funds, investment funds, pension funds, stockbrokers, or any other institutional entity. Fourth, we classify central and local governments as government investors (GOV). Finally, foundations, cooperatives, cross-holdings, groups of employees, trust funds, and any other type of entity where identity cannot be determined are categorized as other investors (OTH).

Subsequently, in order to identify the impact of other large shareholders contesting the controlling shareholder (H2), we create five measures. MLS is a dummy variable that equals one if the company has at least one large shareholder, with a threshold of 10% voting rights, beyond the controlling shareholder. We use two additional measures to quantify contesting the controlling shareholder's power. CONT1 is the ratio of the voting rights of the second largest shareholder to the voting rights of the large shareholders, and CONT2 is the ratio of voting rights of large shareholders beyond the controlling shareholder to the voting rights of the controlling shareholder. We also create two metrics of ownership concentration, such that they measure the opposite of CONT1 and CONT2. We use the Herfindahl Concentration Index (HH1) as the sum of the squares of the voting rights of the large shareholders, $\sum_{i=1}^n (voting\ rights_i)^2$ and the Herfindahl Concentration Differences (HH2) as the sum of the squared difference between the voting rights of the first and second largest shareholders, the voting rights of the second and third largest shareholders, and so on, $\sum_{i=1}^n (voting\ rights_i - voting\ rights_{i+1})^2$.

3.3.4 Firm-level control variables

We include six additional variables to control firm-level issues that might influence risk-taking. We proxy for profitability (ROA) with the ratio of net income to total assets. We control for firm size (SIZE) using the natural logarithm of total assets. We capture financial leverage (LEV) with the ratio of total debt to total assets. The company's age (AGE) is measured as the natural logarithm of the

number of years since the company's foundation. We also control for capital expenditures (CAPEX) as the ratio of capital expenditures to total assets. Finally, CEO tenure (CEO TEN) is measured as the natural logarithm of the number of years the CEO has been serving as the company's CEO. Table 12 describes the variables included in the regressions. To mitigate the impact of extreme values, we winsorize all continuous variables at 1% level in both tails.

Table 12. Definition of variables

Abbreviation	Variable		Measure	Source
Risk-taking variables				
TR	Total risk		Annualized standard deviation of daily stock returns	Refinitiv Eikon
IR	Idiosyncratic risk		Annualized standard deviation of residuals from the Market Model	Refinitiv Eikon
Ownership structure variables				
FAM	Family shareholder	large	Dummy variable that equals 1 if the controlling shareholder is a family, and 0 otherwise	Hand collected from annual reports, SEC Form 20F, and corporate websites
FOR	Foreign shareholder	large	Dummy variable that equals 1 if the controlling shareholder is a foreign investor, and 0 otherwise	
INST	Institutional shareholder	large	Dummy variable that equals 1 if the controlling shareholder is an asset manager, bank, insurance company, mutual fund, investment fund, pension fund, stockbroker, or any other institutional investor, and 0 otherwise	
GOV	Government shareholder	large	Dummy variable that equals 1 if the controlling shareholder is a government investor, and 0 otherwise	
OTH	Other shareholders	large	Dummy variable that equals 1 if the controlling shareholder is another large investor, and 0 otherwise	
MLS	Multiple shareholders	large	Dummy variable that equals 1 if the company has at least two large shareholders	
CONT1	Contestability of control		Ratio of voting rights of the second largest shareholder to the voting rights of the controlling shareholders	
CONT2	Contestability of control		Ratio of cumulative voting rights of the large shareholders beyond the controlling shareholder to the voting rights of the controlling shareholders	
HH1	Herfindahl concentration index		Sum of the squares of the voting rights of the large shareholders	
HH2	Herfindahl concentration differences		Sum of the squared difference between the voting rights of the first and second largest shareholders, the voting rights of the second and third largest shareholders, and so on	
Firm-level control variables				
ROA	Profitability		Ratio of net income to total assets	Refinitiv Eikon
SIZE	Size		Natural logarithm of total assets	Refinitiv Eikon
LEV	Financial leverage		Ratio of total debt to total assets	Refinitiv Eikon
AGE	Age of company	the	Natural logarithm of years since the foundation of the company	Hand collected from annual reports and corporate websites
CAPEX	Capital expenditures		Ratio of capital expenditures to total assets	Refinitiv Eikon

CEO TEN	CEO tenure	Natural logarithm of the number of years the CEO has been serving as the company's CEO	Hand collected from annual reports, SEC Form 20F, corporate websites, corporate press releases, and business press websites
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3.3.5 Methodology

We use panel data by combining longitudinal with cross-section data to deal with unobservable heterogeneity. In order to address endogeneity and reverse causality, we run the two-step system Generalized Method of Moments (GMM) proposed by Arellano and Bover (1995) and Blundell and Bond (1998). We use all right-hand-side variables lagged from t-1 to t-2 as instruments. The validity of GMM instruments depends on the overidentification restrictions and the absence of second-order correlation with the error term of the estimates. We therefore run the tests of joint validity of the selected instruments (Hansen test) and second-order autocorrelation (AR2).

We estimate Equations 1, 2, and 3 to identify the relationship between ownership structure and corporate risk-taking. We propose Equation (1) to test whether the different types of controlling shareholders display different firm risk-taking behaviour:

$$CRT_{it} = \beta_0 + \beta_k(Identity\ variables_{it}) + \omega_k X_{it} + \gamma_i + \eta_i + \mu_t + \varepsilon_{it}, \quad (1)$$

where CRT_{it} are the two measures of corporate risk-taking: Total Risk (TR) and Idiosyncratic Risk (IR). TR is measured as the annualized standard deviation of daily stock returns, and IR is the annualized standard deviation of residuals from the Market Model. $Identity\ variables_{it}$ are the categorical variables of large shareholder identity: Family (FAM), foreign investors (FOR), institutional investors (INST), local or central government (GOV), and other large shareholders (OTH). X_{it} is the vector of firm-level control variables: profitability (ROA), size (SIZE), financial leverage (LEV), company age (AGE), capital expenditures

(CAPEX), and CEO tenure (CEO TEN). We control for unobservable industry-specific effects (γ_i), unobservable country-fixed effects (η_i), and time-variant fixed effects (μ_t). We draw on a two-digit NAICS Sector Code to control for industry effect. ε_{it} is the stochastic error in the estimations.

To disentangle the effect of control contestability of the controlling shareholder on corporate risk, we estimate Equation 2:

$$CRT_{it} = \beta_0 + \beta_k(Contest_{it}) + \omega_k X_{it} + \gamma_i + \eta_i + \mu_t + \varepsilon_{it}, \quad (2)$$

where $Contest_{it}$ are the set of five measures contesting control. MLS is a dummy variable that equals one if the company has at least two large shareholders. We use two measures of the non-controlling large shareholders' voting rights relative to the voting rights of the controlling shareholders (CONT1 and CONT2). We also include HH1 and HH2 to measure the equitable distribution of voting rights of the largest shareholders.

Finally, we use Equation 3 to estimate the moderating role of large shareholders' identity in the relationship between control contestability to the controlling shareholder and risk-taking:

$$\begin{aligned} CRT_{it} = & \beta_0 + \beta_1(CONT1 \times FAMFAM/CONT1 \times FAMFOR/CONT1 \times FAMINST) \\ & + \beta_2(FAMFAM/FAMFOR/FAMINST) + \beta_3(CONT1) + \omega_k X_{it} + \gamma_i \\ & + \eta_i + \mu_t + \varepsilon_{it}, \end{aligned} \quad (3)$$

where we interact contesting control (CONT1) with the most common types of large shareholders (FAMFAM, FAMFOR, FAMINST) to identify how large shareholders interact with each other. We therefore focus on whether the second largest shareholder colludes with or monitors the controlling shareholder.

3.4 Results

3.4.1 Descriptive statistics

Panel A of Table 13 shows the descriptive statistics for the variables analysed. The average of TR and IR are 0.351 and 0.290, respectively. Families are the most common type of controlling shareholders –controlling 70.1% of companies. The second largest category is foreign investors (19.6%). Finally, institutional investors, government, and other shareholders control 4.4%, 2.9%, and 3.0%, respectively. The MLS variable indicates that around one-third of the sample has more than one large shareholder who holds at least 10% of the company's voting rights (33.0%). On average, CONT1 and CONT2 are 0.144 and 0.176, respectively. Average HH1 and HH2 are 0.378 and 0.337, respectively. Contesting control (ownership concentration) measures are smaller (greater) than those reported by Jara et al. (2019) and Pombo and Taborda (2017). This can be explained by the fact that our study considers not only family ties when estimating ownership structure but also shareholder agreements or joint-voting arrangements. In this way, we avoid overestimation (underestimation) of contesting control (ownership concentration) measures by considering that two or more shareholders who signed a joint-voting arrangement are regarded as the same controlling shareholder.

Panel B of Table 13 reports the mean and standard deviation by country. Again, families are the main dominant shareholder in nearly all countries.¹⁶ Moreover, in all countries, a significant proportion of companies have more than one large shareholder. Peru and Chile have the highest levels of controlling shareholder contestability.

¹⁶ Colombia is the exception, since the government is the main controlling shareholder. It is worth noting that 18.1% of Colombian companies are controlled by other shareholders. This is explained by the fact that a significant number of Colombian companies are controlled by *Grupo Argos*, *Grupo Sura*, and *Grupo Nutresa*, which are also listed on the Colombian Stock Exchange. These companies have a cross-ownership structure, making it difficult to distinguish the identity of the controlling shareholder.

Table 13. Descriptive statistics

Panel A: Descriptive statistics of the total sample							
Variables	Mean	Std. Dev.	Min	Max	Quartiles		
					q25	q50	q75
TR	0.351	0.145	0.154	0.900	0.251	0.314	0.410
IR	0.290	0.131	0.122	0.855	0.200	0.255	0.341
FAM	0.701	0.458	0.000	1.000	0.000	1.000	1.000
FOR	0.196	0.397	0.000	1.000	0.000	0.000	0.000
INST	0.044	0.204	0.000	1.000	0.000	0.000	0.000
GOV	0.029	0.169	0.000	1.000	0.000	0.000	0.000
OTH	0.030	0.171	0.000	1.000	0.000	0.000	0.000
MLS	0.330	0.470	0.000	1.000	0.000	0.000	1.000
CONT1	0.144	0.250	0.000	0.969	0.000	0.000	0.224
CONT2	0.176	0.330	0.000	1.667	0.000	0.000	0.228
HH1	0.378	0.232	0.009	1.000	0.204	0.341	0.517
HH2	0.337	0.250	0.004	1.000	0.145	0.278	0.497
ROA	0.082	0.086	-0.168	0.522	0.042	0.072	0.112
SIZE	14.465	1.413	10.777	17.822	13.513	14.530	15.345
LEV	0.534	0.176	0.100	0.931	0.424	0.544	0.660
AGE	3.792	0.780	-0.180	5.571	3.352	3.935	4.338
CAPEX	0.055	0.045	0.000	0.229	0.025	0.044	0.072
CEO TEN	1.535	1.233	-5.207	3.840	0.759	1.659	2.527

Panel B: Descriptive statistics by country								
Variables	Chile		Colombia		Mexico		Peru	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
TR	0.322	0.137	0.314	0.110	0.367	0.138	0.415	0.172
IR	0.273	0.136	0.254	0.100	0.294	0.118	0.346	0.141
FAM	0.773	0.419	0.223	0.418	0.804	0.397	0.563	0.497
FOR	0.197	0.398	0.149	0.357	0.101	0.302	0.425	0.495
INST	0.030	0.171	0.144	0.352	0.054	0.226	0.000	0.000
GOV	0.000	0.000	0.303	0.461	0.000	0.000	0.012	0.110
OTH	0.000	0.000	0.181	0.386	0.041	0.199	0.000	0.000
MLS	0.390	0.488	0.420	0.495	0.218	0.413	0.364	0.482
CONT1	0.158	0.257	0.137	0.206	0.115	0.243	0.175	0.265
CONT2	0.191	0.346	0.165	0.250	0.131	0.295	0.239	0.384
HH1	0.379	0.204	0.365	0.240	0.344	0.205	0.455	0.317
HH2	0.330	0.226	0.320	0.261	0.313	0.217	0.416	0.339
ROA	14.303	1.517	15.050	1.348	14.844	1.221	13.744	1.138
SIZE	0.547	0.167	0.497	0.171	0.553	0.191	0.480	0.158
LEV	3.825	0.825	4.068	0.616	3.660	0.776	3.831	0.694
AGE	0.052	0.043	0.059	0.047	0.053	0.041	0.067	0.055
CAPEX	1.433	1.221	1.269	1.112	1.825	1.246	1.333	1.193
CEO TEN	0.322	0.137	0.314	0.110	0.367	0.138	0.415	0.172

The number of observations is 2,085

Distribution and ownership by large shareholder identity is presented in Table 14. Panel A of Table 14 reports that 70.07% of firms are controlled by families, 19.62% by foreign investors, 4.36% by institutional investors, and 2.93% by local or central governments. Around 67% of firms have a single controlling shareholder. In contrast, 12.61% of firms have a family as the second largest shareholder.

Meanwhile, firms with an institutional investor and a foreign investor as the second largest shareholder account for 11.22% and 5.56%, respectively. Only 1.68% of firms have a government investor as the second largest shareholder. The presence of third, fourth, and fifth large shareholders is irrelevant. Panel B of Table 14 summarizes the average voting rights of large shareholders by identity. We focus only on the most representative large shareholders. On average, families hold 55.22% of voting rights when they are the controlling shareholders, and are thus the most powerful and influential investors. When foreign investors control the company, they hold 68.17% of the voting rights.

Table 14. Distribution and ownership by large shareholder identity.

Panel A: Distribution by large shareholder identity						
Shareholder	Family	Foreign	Inst. Inv.	Gov.	Other LS	Non-LS
First	70.07%	19.62%	4.36%	2.93%	3.02%	-
Second	12.61%	5.56%	11.22%	1.68%	1.97%	66.95%
Third	2.97%	0.14%	3.45%	0.34%	0.43%	92.66%
Fourth	0.67%	-	0.29%	-	-	99.04%
Fifth	0.29%	-	0.05%	-	-	99.66%

Panel B: Ownership structure (mean) by large shareholder identity							
Shareholder	Family	Foreign	Inst. Inv.	Gov.	Other LS	Non-LS	Total
First	55.22%	68.17%	26.96%	68.61%	46.62%	0.00%	56.66%
Second	17.77%	23.97%	13.49%	14.76%	12.77%	0.00%	5.59%
Third	14.42%	12.46%	10.93%	15.89%	10.77%	0.00%	0.92%
Fourth	12.00%	0.00%	10.06%	0.00%	0.00%	0.00%	0.11%
Fifth	10.00%	0.00%	10.48%	0.00%	0.00%	0.00%	0.03%

The number of observations is 2,085.

Table 15 presents the correlation matrix. We do not expect significant multicollinearity problems because the correlation between the independent variables is not too high. In any case, we also estimated the Variance Inflation Factor (VIF) to check for the absence of multicollinearity. All regressions present a VIF of less than 2.

Table 15. Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) TR	1.000																	
(2) IR	0.928***	1.000																
(3) FAM	-0.029	-0.021	1.000															
(4) FOR	0.011	0.027	-0.756***	1.000														
(5) INST	0.112***	0.102***	-0.327***	-0.106***	1.000													
(6) GOV	-0.029	-0.051**	-0.266***	-0.086***	-0.037*	1.000												
(7) OTH	0.022	0.043*	-0.026	-0.086***	0.148***	0.011	1.000											
(8) MLS	0.008	0.010	-0.004	-0.111***	0.129***	0.047**	0.886***	1.000										
(9) CONT1	0.081***	0.094***	0.022	-0.126***	0.187***	-0.028	0.789***	0.820***	1.000									
(10) CONT2	0.090***	0.115***	0.003	-0.109***	0.205***	-0.038*	0.874***	0.759***	0.939***	1.000								
(11) HH1	-0.009	-0.024	-0.132***	0.277***	-0.249***	0.097***	-0.327***	-0.333***	-0.368***	-0.363***	1.000							
(12) HH2	-0.004	-0.029	-0.125***	0.267***	-0.232***	0.086***	-0.514***	-0.544***	-0.531***	-0.509***	0.960***	1.000						
(13) ROA	-0.150***	-0.205***	-0.065***	0.129***	-0.109***	0.002	-0.031	-0.022	-0.061***	-0.059***	0.168***	0.150***	1.000					
(14) SIZE	-0.271***	-0.414***	-0.071***	0.039*	-0.062***	0.157***	-0.125***	-0.066***	-0.142***	-0.175***	0.088***	0.082***	-0.030	1.000				
(15) LEV	0.062***	0.035*	0.055**	0.005	-0.033	0.011	-0.003	0.020	-0.009	-0.023	-0.039*	-0.041*	-0.188***	0.308***	1.000			
(16) AGE	-0.060***	-0.082***	0.079***	-0.072***	-0.051**	0.078***	-0.062***	-0.035	-0.036*	-0.060***	-0.022	-0.010	-0.048**	0.193***	0.021	1.000		
(17) CAPEX	-0.060***	-0.099***	-0.045**	0.038*	0.005	0.029	0.015	0.021	0.004	0.007	0.073***	0.049**	0.162***	-0.013	-0.012	-0.083***	1.000	
(18) CEO TEN	-0.040*	-0.058***	0.042*	-0.088***	-0.005	0.052**	-0.070***	-0.064***	-0.047**	-0.055**	-0.030	0.001	0.107***	0.116***	-0.146***	0.194***	-0.119***	1.000

This table presents the correlation coefficients ***, **, and * for 1%, 5%, and 10% significance levels. The number of observations is 2,085.

3.4.2 Results and discussion

Table 16 reports the results regarding Hypothesis 1. Although our focus of attention is the effect of contesting control in monitoring suboptimal risky decisions, we first test which type of controlling shareholder plays a critical role in corporate risk-taking. In Columns 1, 3, 5, and 7, we use total risk, and in Columns 2, 4, 6, and 8, we use idiosyncratic risk. As expected, in Columns 1 and 2, the estimates for the family controlling shareholders are negative and statistically significant. In turn, our results indicate that when the controlling shareholder is a family, there is an economically significant reduction in corporate risk.¹⁷ Companies with a family as the controlling shareholder are associated with a 39.31% (26.72%) standard deviation decrease in TR (IR).¹⁸

These results provide evidence that controlling families undertake conservative projects, which may prove detrimental to the other shareholders, suggesting that the horizontal agency problem among shareholders is common in family-controlled firms and in a poor investor protection context. As suggested by Anderson et al. (2012), Chen and Hsu (2009), and Zhang and Luo (2021), companies controlled by large and undiversified shareholders –such as families– are more likely to adopt conservative policies, presumably with the aim of decreasing the risk exposure of their personal wealth.

In Columns 3 and 4, we report strong evidence that foreign controlling shareholders significantly and positively affect corporate risk. Firms controlled by foreign investors have a 50.34% (54.20%) standard deviation increase in TR (IR). This is in line with Boubakri, Cosset, et al. (2013) and Huang et al. (2023), who point out that foreign controlling shareholders focus on risky but innovative decisions that

¹⁷ To measure the economic magnitude of the model's coefficients, we scale by the standard deviation of the dependent variable instead of the mean. See Mitton (2022) for more details.

¹⁸ This value is calculated as the ratio of the coefficient of FAM to the standard deviation of total risk: $-39.31\% \left(\frac{-0.057}{0.145} \right)$. We use the same procedure for the other dummy variables.

could increase the company's value. At the same time, Kim (2011) and Nguyen (2012) document that foreign investors have fewer ties to the company's management, which translates into efficient monitoring of the company's decision-making and a high degree of risk-taking.

Columns 7 and 8 show that the coefficients for GOV are negative and statistically significant. Firms have a 64.14% (90.84%) standard deviation decrease of TR (IR) when the controlling shareholder is a government entity. These results corroborate the findings of Chen et al. (2017) and Khaw et al. (2016), who find that politically-oriented and risk-averse investors put pressure on firms to adopt low-risk decisions that ensure their political tenure and social benefits. Additionally, government shareholders put pressure on the company to adopt a risk-averse attitude since they are naturally supported by the state and have strong ties with financial institutions (Vo, 2018).

As reported in Columns 5 and 6, when the controlling shareholder is an institutional investor (INST), there is no statistically significant relationship with corporate risk, irrespective of the measure of risk used. These results –which contrast with García-García et al. (2020) and Paligorova (2009)– can be explained by the strong restrictions of regulators towards Latin American institutional investors (OECD/International Finance Corporation, 2011).

Our first set of results thus provides strong evidence of heterogeneity among the different large shareholders vis-à-vis their effect on corporate risk-taking.¹⁹

¹⁹ We do not report the results of the OTH coefficient because the variable includes miscellaneous entities. In any case, the coefficients are not significant.

Table 16. Identity of large shareholders and corporate risk-taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR	(5) TR	(6) IR	(7) TR	(8) IR
FAM	-0.057 *** (0.019)	-0.035 ** (0.016)						
FOR			0.073 *** (0.020)	0.071 *** (0.019)				
INST					0.048 (0.061)	0.049 (0.060)		
GOV							-0.099 ** (0.050)	-0.119 *** (0.045)
ROA	-0.243 *** (0.049)	-0.364 *** (0.043)	-0.222 *** (0.048)	-0.336 *** (0.043)	-0.267 *** (0.049)	-0.356 *** (0.045)	-0.268 *** (0.049)	-0.356 *** (0.046)
SIZE	-0.050 *** (0.005)	-0.051 *** (0.005)	-0.057 *** (0.005)	-0.056 *** (0.005)	-0.056 *** (0.005)	-0.053 *** (0.005)	-0.062 *** (0.006)	-0.061 *** (0.006)
LEV	0.123 *** (0.038)	0.151 *** (0.033)	0.148 *** (0.037)	0.162 *** (0.031)	0.139 *** (0.039)	0.151 *** (0.034)	0.152 *** (0.043)	0.167 *** (0.037)
AGE	0.005 (0.011)	0.004 (0.009)	0.002 (0.011)	0.001 (0.010)	0.001 (0.011)	-0.005 (0.009)	-0.008 (0.012)	-0.017 (0.011)
CAPEX	-0.420 *** (0.087)	-0.486 *** (0.080)	-0.446 *** (0.086)	-0.527 *** (0.083)	-0.416 *** (0.088)	-0.486 *** (0.080)	-0.434 *** (0.089)	-0.478 *** (0.083)
CEO TEN	-0.033 (0.025)	-0.070 *** (0.024)	-0.031 (0.026)	-0.065 *** (0.023)	-0.018 (0.025)	-0.052 ** (0.023)	-0.007 (0.028)	-0.029 (0.027)
Constant	1.054 *** (0.117)	1.307 *** (0.114)	1.072 *** (0.122)	1.311 *** (0.114)	1.003 *** (0.110)	1.234 *** (0.112)	1.020 *** (0.119)	1.206 *** (0.121)
Observations	2,085	2,085	2,085	2,085	2,085	2,085	2,085	2,085
AR(2) p-value	0.740	0.415	0.742	0.409	0.662	0.483	0.611	0.617
Hansen test (χ^2)	112.56	106.22	112.08	107.25	110.98	106.87	110.74	107.38
F-test	89.51 ***	81.39 ***	93.85 ***	68.12 ***	92.60 ***	75.95 ***	104.22 ***	69.69 ***

Estimated coefficients (standard errors) from Equation 1 using the two-step system GMM. ***, **, and * for 1%, 5%, 10% significance level. All the regressions include country, time, and industry dummy variables. AR(2) is a test for second-order serial correlation. Hansen is the test of over-identifying restrictions. F-stat is a test for the joint significance of the independent variables.

The estimates concerning Hypothesis 2 are shown in Table 17 and Table 18. In these tables, we use five measures of the LNCSs monitoring role. According to Table 17, in Columns 1 and 2, we find that the presence of MLS positively and significantly impacts corporate risk-taking. Companies with MLS are associated with an 11.72% (8.40%) increase in the TR (IR) standard deviation. The presence of MLS alleviates the problem of over-conservative decisions that could result in private benefits for controlling shareholders at the expense of minority shareholders. This result may also be explained by the fact that the presence of MLS implies the risk of disagreements, making it more difficult for the controlling shareholder to gain the approval of the other large shareholders when seeking to

undertake low-risk projects. This means that MLS (as opposed to the single largest shareholder) effectively monitor the controlling shareholder and avoid suboptimal financial risk decisions that could harm minority shareholder wealth.

In columns 3 to 6, we test the effect of controlling shareholder contestability measures (CONT1 and CONT2). We report that controlling shareholder contestability –measured as the ratio of the voting rights of the second largest shareholder to the voting rights of the controlling shareholder (CONT1)– is associated with a statistically and economically significant increase in corporate risk. A one standard deviation increase in CONT1 is associated with a 5.69% (8.06%) increase in the standard deviation of TR (IR).²⁰ The fact that lower control contestability is associated with suboptimal risky decisions is consistent with the idea that non-controlling shareholders face difficulties in enacting other control mechanisms (for instance, a seat on the board of directors or other advisory boards) –thereby suggesting a limited monitoring role.

Our results thus provide strong evidence that the closer the voting rights of the second shareholder are to those of the first, the greater the control contestability and the greater the corporate risk. In this sense, we highlight that the two largest shareholders with similar voting rights are an ownership structure that emerges as an efficient internal governance mechanism. Similar results are found when we use the ratio of the cumulative voting rights of the other large shareholders beyond the controlling shareholder to the voting rights of the controlling shareholder (CONT2). A one standard deviation change in CONT2 means a 10.24% (8.56%) standard deviation increase in TR (IR). These results can be explained by the fact that the greater the voting power in the hands of the LNCs, the greater the likelihood of contesting the excessive power of the controlling shareholder. Our findings suggest

²⁰ This value is calculated as the ratio of the coefficient of CONT1 multiplied by the standard deviation of CONT1 relative to the standard deviation of TR: $5.69\% \left(\frac{0.033 \times 0.250}{0.145} \right)$. We use the same procedure for the other continuous variables.

that the presence and relative size of LNCSS is conducive to increased monitoring of the principal-principal agency problem.

Table 17. Contestability of control and corporate risk-taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR	(5) TR	(6) IR
MLS	0.017 *** (0.006)	0.011 ** (0.005)				
CONT1			0.033 *** (0.012)	0.032 *** (0.011)		
CONT2					0.045 ** (0.023)	0.034 ** (0.017)
ROA	-0.251 *** (0.034)	-0.285 *** (0.031)	-0.213 *** (0.035)	-0.348 *** (0.032)	-0.365 *** (0.062)	-0.337 *** (0.046)
SIZE	-0.046 *** (0.004)	-0.053 *** (0.004)	-0.049 *** (0.004)	-0.051 *** (0.003)	-0.068 *** (0.007)	-0.052 *** (0.005)
LEV	0.163 *** (0.026)	0.190 *** (0.023)	0.169 *** (0.025)	0.152 *** (0.024)	0.175 *** (0.039)	0.143 *** (0.033)
AGE	-0.019 * (0.011)	-0.020 ** (0.009)	-0.002 (0.008)	-0.008 (0.006)	0.005 (0.013)	-0.007 (0.009)
CAPEX	-0.482 *** (0.071)	-0.579 *** (0.052)	-0.527 *** (0.070)	-0.550 *** (0.067)	-0.539 *** (0.095)	-0.523 *** (0.081)
CEO TEN	-0.127 *** (0.020)	-0.099 *** (0.017)	-0.051 *** (0.016)	-0.044 *** (0.016)	-0.011 (0.029)	-0.055 ** (0.024)
Constant	1.325 *** (0.102)	1.424 *** (0.097)	1.145 *** (0.074)	1.211 *** (0.071)	0.951 *** (0.118)	1.235 *** (0.111)
Observations	2,085	2,085	2,085	2,085	2,085	2,085
AR(2) p-value	0.676	0.479	0.665	0.520	0.545	0.477
Hansen test (χ^2)	141.89	148.63	134.26	130.11	109.50	107.12
F-test	303.07 ***	168.89 ***	219.77 ***	191.51 ***	92.92 ***	69.80 ***

Estimated coefficients (standard errors) from Equation 2 using the two-step system GMM. ***, **, and * for 1%, 5%, 10% significance level. All the regressions include country, time, and industry dummy variables. AR(2) is a test for second-order serial correlation. Hansen is the test of over-identifying restrictions. F-stat is a test for the joint significance of the independent variables.

Additionally, we use two complementary measures of ownership concentration, whose results are displayed in Columns 1 and 2 of Table 18. We use HH1, which is calculated as the sum of the squared voting rights of the largest shareholders. We also compute HH2 as the sum of the squared difference between the voting rights of the first and second largest shareholders, the voting rights of the second and third largest shareholders, and so on. The higher the values of HH1 or HH2, the greater the concentration of the largest shareholders' voting rights, the less the dispersion of voting rights, and the less the controlling shareholder contestability. These

results are also economically and statistically significant. A one standard deviation increase in HH1 leads to an equal 17.6% (21.37%) change in the standard deviation of TR (IR), and for a one standard deviation increase in HH2, the decrease in the standard deviation of TR (IR) is 16.03% (19.27%). We thus confirm that a balanced distribution of power among large shareholders increases corporate risk-taking.

In Columns 5 and 6 of Table 18, we address the question of whether the voting power of LNCSs limits or exacerbates the conservative behaviour of family-controlled firms. To test this relationship, we introduce an interactive variable (CONT1FAM) between control contestability and the family identity of the controlling shareholder. The interacted term coefficient is positive and statistically significant in both models. For example, in Column 5, the marginal effect of control contestability in family firms equals 0.292²¹. Thus, a one standard deviation increase in the control contestability measure (CONT1) increases the standard deviation of the TR (IR) in companies controlled by a family investor by 50.34% (57.25%).²² In line with previous research, our results imply that an increase in the voting power of the LNCSs in family-controlled firms is associated with a greater likelihood of blocking conservative investment decisions, thus increasing corporate risk-taking (Boubaker et al., 2016; Mishra, 2011), as also stated in Hypothesis 2.

²¹ The marginal effect is calculated as $0.090 + 0.202 \times \text{FAM}$. Therefore, when $\text{FAM} = 1$, the marginal effect is equal to 0.292 ($0.090 + 0.202 \times 1$).

²² This value is calculated as the ratio of the marginal effect of the control contestability measure in family firms multiplied by the standard deviation of CONT1 relative to the standard deviation of TR. $50.34\% \left(\frac{0.292 \times 0.250}{0.145} \right)$. We use the same procedure for the other interactive terms.

Table 18. Contestability of control and corporate risk-taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR	(5) TR	(6) IR
HH1	-0.110 *** (0.029)	-0.112 *** (0.025)				
HH2			-0.093 *** (0.028)	-0.101 *** (0.024)		
CONT1					0.090 *** (0.026)	0.099 *** (0.020)
FAM					-0.062 *** (0.015)	-0.057 *** (0.014)
CONT1 FAM					0.202 *** (0.042)	0.201 *** (0.032)
ROA	-0.296 *** (0.049)	-0.394 *** (0.043)	-0.280 *** (0.048)	-0.389 *** (0.043)	-0.234 *** (0.036)	-0.352 *** (0.032)
SIZE	-0.057 *** (0.005)	-0.056 *** (0.005)	-0.057 *** (0.005)	-0.056 *** (0.005)	-0.049 *** (0.004)	-0.051 *** (0.004)
LEV	0.154 *** (0.037)	0.170 *** (0.031)	0.158 *** (0.037)	0.181 *** (0.031)	0.144 *** (0.029)	0.132 *** (0.025)
AGE	0.004 (0.010)	-0.004 (0.009)	0.006 (0.010)	-0.002 (0.009)	0.002 (0.007)	<0.000 (0.006)
CAPEX	-0.466 *** (0.085)	-0.526 *** (0.078)	-0.430 *** (0.084)	-0.506 *** (0.078)	-0.523 *** (0.076)	-0.598 *** (0.063)
CEO TEN	-0.022 (0.024)	-0.049 ** (0.023)	-0.023 (0.024)	-0.055 ** (0.023)	-0.056 *** (0.017)	-0.066 *** (0.017)
Constant	0.990 *** (0.111)	1.207 *** (0.114)	1.008 *** (0.112)	1.241 *** (0.116)	1.147 *** (0.080)	1.402 *** (0.078)
Observations	2,085	2,085	2,085	2,085	2,085	2,085
AR(2) p-value	0.697	0.439	0.697	0.437	0.578	0.732
Hansen test (χ^2)	106.95	107.41	110.66	109.58	134.94	130.64
F-test	88.67 ***	64.39 ***	88.62 ***	67.82 ***	194.97 ***	151.68 ***

Estimated coefficients (standard errors) from Equation 2 using the two-step system GMM. ***, **, and * for 1%, 5%, 10% significance level. All the regressions include country, time, and industry dummy variables. AR(2) is a test for second-order serial correlation. Hansen is the test of over-identifying restrictions. F-stat is a test for the joint significance of the independent variables.

The models in Table 19 seek to disentangle the impact of large shareholders' identity on the relationship between control contestability and corporate risk. We therefore go one step further and pay special attention to family-controlling shareholders because they usually have a disproportionately high level of a firm's stake, keeping it relatively stable over time, in addition to which they also typically enjoy a large consumption of private benefits. They are also the most common ownership structure in emerging economies such as Latin America, where the potential for expropriating wealth from other shareholders is more pronounced.

In Columns 1 to 6, we focus only on the control contestability exercised by the second-largest shareholder to test Hypothesis 3. As can be seen in Table 14, the second largest shareholder has a relevant voting power to moderate or increase the conservative behaviour of family-controlled firms. Therefore, we evaluate the role played by the identity of the second largest shareholder in the relationship between control contestability and corporate risk-taking. We focus on three complex ownership structures: i) when the two largest shareholders are families (FAMFAM), ii) when the controlling shareholder is a family and the second largest shareholder is an institutional investor (FAMINST), iii) when the controlling shareholder is a family and the second largest shareholder is a foreign investor (FAMFOR).²³ In turn, we investigate whether the identity of LNCSS shapes the incentives to monitor or collude with the controlling shareholder and thus affects financial outcomes.

Several findings should be highlighted. The first scenario is measured through the interacted variable CONT1FAMFAM. We respond to the call of Duran and Ortiz (2020) by exploring whether the second largest family shareholders counteract the myopic risk aversion of controlling families by diverting attention towards socioemotional concerns. As can be seen in Columns 1 and 2, the interaction CONT1FAMFAM is negative and statistically significant. Moreover, the sum of CONT1 and CONT1FAMFAM is negative, which means that a one standard deviation in CONT1 is associated with a 68.27% (67.37%) decrease in the standard deviation of TR (IR) in firms with families as the first and second-largest shareholder. In contrast to Boubaker et al. (2016) and García-García et al. (2020), our results show that when the two largest shareholders are both family investors, they form a coalition that focuses on the common objective of avoiding jeopardizing their financial and non-financial benefits. Therefore, this controlling coalition decreases the marginal costs of the conservative managerial style of the

²³ In the sample, the percentage of observations with an ownership structure of FAM FAM, FAM INST, and FAM FOR is 14.03%, 10.41%, and 7.05%, respectively.

controlling shareholder, which reduces corporate risk-taking. Consistent with this view, similar results are obtained by Attig et al. (2008), who argue that the closer alignment of interests of both family investors leads to resource diversion and conflicts with minority shareholders.

As regards the control contestability of the family-institutional investor coalition (Columns 3 and 4), we confirm that the interaction coefficient is positive and statistically significant, partially supporting the findings of Cueto (2013), who report that institutional investors are governance-enhancing investors who alleviate concerns about resource diversion and wealth extraction. We show that in companies who have this ownership structure (FAMINST), a one standard deviation increase in CONT1 is associated with a 35.52% (36.26%) increase in the standard deviation of TR (IR). Similar to Boubaker et al. (2016), our results support the hypothesis that large institutional shareholders are sophisticated monitors because they have the knowledge and resources to block the conservative projects of family-controlling shareholders. As reported by De-la-Hoz and Pombo (2016) and Pombo and Taborda (2017), institutional investors in Latin America are actively involved in corporate decision-making, mitigating profit diversion towards low-risk projects and improving firm value. In addition, institutional investors are not incentivized to collude with large shareholders who are potentially interested in extracting company wealth, presumably because they are constantly supervised by regulators (Maury & Pajuste, 2005).

Finally, we find no evidence that control contestability impacts corporate risk-taking in family firms with foreign investors as the second largest shareholder (Columns 5 and 6). The coefficient of the interaction (CONT1FAMFOR) is statistically insignificant. In contrast to Sacristán-Navarro et al. (2015), we do not support the notion that large non-controlling foreign shareholders positively impact organizational outcomes. This is consistent with the argument that large non-controlling foreign shareholders lack sufficient equity stakes to be actively involved

in risk-taking decision-making, unlike controlling foreign shareholders.

Table 19. Contestability of control, the identity of large shareholders, and corporate risk-taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR	(5) TR	(6) IR
CONT1	0.063 *** (0.019)	0.044 *** (0.015)	0.034 *** (0.013)	0.032 ** (0.015)	0.109 *** (0.023)	0.022 * (0.011)
FAM FAM	-0.148 *** (0.045)	-0.154 *** (0.036)				
CONT1 FAM FAM	-0.459 *** (0.090)	-0.397 *** (0.073)				
FAM INST			0.061 ** (0.027)	0.114 *** (0.029)		
CONT1 FAM INST			0.172 *** (0.061)	0.158 *** (0.053)		
FAM FOR					0.052 (0.052)	0.033 (0.056)
CONT1 FAM FOR					0.156 (0.097)	0.120 (0.094)
ROA	-0.251 *** (0.039)	-0.344 *** (0.038)	-0.231 *** (0.038)	-0.339 *** (0.033)	-0.246 *** (0.049)	-0.355 *** (0.042)
SIZE	-0.053 *** (0.004)	-0.052 *** (0.004)	-0.051 *** (0.004)	-0.053 *** (0.003)	-0.040 *** (0.005)	-0.062 *** (0.004)
LEV	0.187 *** (0.029)	0.169 *** (0.026)	0.180 *** (0.027)	0.084 *** (0.026)	0.139 *** (0.028)	0.154 *** (0.022)
AGE	0.002 (0.009)	-0.001 (0.007)	-0.002 (0.008)	-0.001 (0.007)	0.005 (0.014)	-0.011 * (0.006)
CAPEX	-0.389 *** (0.076)	-0.506 *** (0.067)	-0.555 *** (0.077)	-0.544 *** (0.063)	-0.480 *** (0.066)	-0.584 *** (0.059)
CEO TEN	-0.050 ** (0.020)	-0.052 *** (0.018)	-0.058 *** (0.016)	-0.050 *** (0.017)	-0.071 *** (0.024)	-0.030 * (0.017)
Constant	1.169 *** (0.080)	1.307 *** (0.078)	1.186 *** (0.077)	1.466 (0.076)	1.050 *** (0.123)	1.260 *** (0.077)
Observations	2,085	2,085	2,085	2,085	2,085	2,085
AR(2) p-value	0.380	0.792	0.603	0.750	0.759	0.516
Hansen test (χ^2)	128.08	126.52	131.03	127.03	134.03	119.05
F-test	159.40 ***	196.64 ***	191.52 ***	148.49 ***	258.78 ***	178.15 ***

Estimated coefficients (standard errors) from Equation 3 using the two-step system GMM. ***, **, and * for 1%, 5%, 10% significance level. All the regressions include country, time, and industry dummy variables. AR(2) is a test for second-order serial correlation. Hansen is the test of over-identifying restrictions. F-stat is a test for the joint significance of the independent variables.

3.5 Conclusions, contributions, limitations, and future research

We take a comprehensive approach to the relationship between ownership structure and the riskiness of the firm by focusing on the moderating effect of large shareholder identity. In this way, we disentangle the role of second-tier

shareholders in blocking or exacerbating the suboptimal risk-taking decisions of controlling shareholders. Given the importance of the principal-principal agency problem in the Latin American context, we test the relationship between voting power and the identity of other large shareholders beyond the controlling shareholder and corporate risk-taking. We use a unique hand-collected database composed of 209 non-financial firms from four MILA countries over the period 2005 to 2020.

Our findings contribute to the literature supporting the argument that contesting control appears as a substitute for weak legal protection of minority shareholders, particularly in the context where large-undiversified shareholders are more likely to adopt a dominant position at the expense of other shareholders by implementing a suboptimal risk policy. We report that identity is a source of heterogeneity of controlling shareholders with explanatory power in corporate risk-taking. In addition, we find that the presence and relative voting rights of LNCSs counteract the conservative behaviour of the controlling shareholder. Finally, we study whether the different types of LNCSs have different risk-taking attitudes, which could moderate the relationship between contesting control and corporate risk in family-controlled firms.

We focus on family-controlled firms because these investors are conservative, undiversified, and have incentives and voting power to divert flows towards low-risk projects. In this sense, our study also contributes to the literature addressing two competing views regarding the impact of LNCSs contesting the controlling shareholder. On the one hand, when the second largest shareholder is also a family, they share private benefits and reduce corporate risk. On the other hand, the conservative behaviour of the family controlling shareholder is effectively monitored when the second largest shareholder is an institutional investor. These results confirm the idea that institutional investors have the ability to reduce the myopic risk aversion of controlling families. LNCSs contesting control thus

emerges as an effective monitoring mechanism, although it is conditional on the identity of the large shareholders.

Our study provides valuable results for practitioners, policymakers, and regulators alike. Corporate governance literature has supported the argument that risky decisions are associated with maximization of wealth and economic growth (Faccio et al., 2011; John et al., 2008; Mishra, 2011). Our results thus show some characteristics of an optimal ownership structure to avoid sub-optimal risk-taking and therefore maximize profitability. Latin American economies are characterized by ownership concentration, usually in the hands of families, exacerbated agency conflicts between controlling and minority shareholders, and poor investor protection. Policymakers and regulators in Latin American economies should therefore encourage ownership structures that counterbalance the conservative behaviour of controlling families and thus reduce the negative impact on minority shareholder wealth. We suggest that the presence of LNCSs with sufficient voting power blocks the conservative decision-making of the controlling shareholder and encourages risky but profitable financial decisions. Our results also show that foreign and institutional investors are risk-oriented individuals who are concerned with better corporate governance practices. As such, policymakers can reduce barriers and attract more participation from these investors in the market in order to positively impact local economies.

Our work is not free of limitations. We treat institutional investors as homogeneous shareholders. However, previous evidence confirms the presence of different groups with different impacts on organizational outcomes –independent and grey investors (Ferreira & Matos, 2008). A more fine-grained distinction among institutional investors might therefore shed additional light on the relationship between institutional investor heterogeneity and corporate risk-taking. Similarly, the heterogeneity of foreign shareholders also plays a key role in corporate risk-taking. For instance, foreign investors from countries with strong investor

protection can guide firms towards better corporate governance mechanisms (Aggarwal et al., 2011). In the same vein, the economic conditions and cultural factors (for instance, uncertainty avoidance) of both the home and host country may provide new answers to the risk-taking question. Finally, future research might take into account the generational stage of family businesses. According to García-Ramos and García-Olalla (2011) and García-Ramos et al. (2017), founder-led family firms (as opposed to non-founder-led family firms) prioritize socioemotional wealth over financial objectives. This emphasis on socioemotional wealth can influence governance structure effectiveness and impact the relationship between corporate governance mechanisms and organizational outcomes.

**CAPÍTULO 4: FAMILY BUSINESSES AND
CORPORATE RISK-TAKING: THE
MODERATING ROLE OF INDEPENDENT
DIRECTORS AND INSTITUTIONAL
INVESTORS**

CAPÍTULO 4

Family businesses and corporate risk-taking: The moderating role of independent directors and institutional investors

4.1 Introduction

Although the riskiness of the firms is one of the issues where controlling families are more influential, there is controversial evidence on corporate risk differences either between family and non-family firms or within family firms (Baulkaran & Bhattarai, 2020; Jiang et al., 2015; Lim et al., 2010; Merono-Cerdan et al., 2018; Naldi et al., 2007). According to agency theory, family ownership is seen as attenuating the principal-agent problems since members of the controlling family usually sit on the board of directors or hold managerial positions, internalising the monitoring costs (Jones et al., 2008; Nguyen, 2011). Nevertheless, family involvement in ownership may encourage the principal-principal agency problem because controlling families could use their power to extract minority shareholders' wealth by diverting the company's resources to low-risk decisions (Boubaker et al., 2016; Su & Lee, 2013). This is consistent with the idea that the controlling families are undiversified investors that shape corporate risk-taking according to the risk exposure of their personal wealth (Faccio et al., 2011).

However, the Socioemotional Wealth (SEW) model has also discussed the corporate risk-taking of family-controlled firms. Gómez-Mejía et al. (2007) and Wiseman and Gomez-Mejia (1998) included the SEW arguments for the Behavioural Agency Model (BAM). They point out that the controlling families are actively involved in risk-taking decisions to safeguard their non-financial objectives, e.g., preservation of family firm's social capital, family reputation, ensuring the intergenerational succession, maintaining the family identity,

involvement of family members in senior positions, and conservation of family dynasty, among others. According with this view, the measures of the riskiness of the family firms should incorporate the main characteristics that differ from non-family firms, i.e., the close emotional ties of the family to the company. Following the line opened by Gómez-Mejía et al. (2007), the contemporary literature on family-controlled firms usually uses two types of corporate risk-taking.

The first type of risk, the so-called performance hazard, refers to the probability of failure or insolvency when the firm cannot face its financial obligations. In this sense, two measures are used to capture this type of risk: the deviation between a firm's performance measure relative to a benchmark performance (Gomez-Mejia et al., 2014; Poletti-Hughes & Williams, 2019) or bankruptcy risk, e.g., Altman Z-score (Llanos-Contreras et al., 2021; Pathan, 2009; Zhang & Luo, 2021) or default risk (Abinzano et al., 2021). Gómez-Mejía et al. (2007) highlight that controlling families can accept a high level of risk of failure or bankruptcy, even if it implies forgoing value-increasing projects provided that it preserves the family's socioemotional wealth. The second type of risk, the venturing risk or variability risk, captures corporate decisions with unexpected and volatile flows or with a high probability of increasing the variability of organisational outcomes, such as innovation, participation in new products or markets, and R&D expenses, among others (Poletti-Hughes & Williams, 2019). Empirical studies define this type of risk as the deviation of an investment's returns from its expected returns, using measures such as the volatility of company earnings (Boubaker et al., 2016; Huybrechts et al., 2013; Mishra, 2011) or the volatility of stock returns (Anderson & Reeb, 2003; Du et al., 2022; Gomez-Mejia et al., 2010; Lee et al., 2018; Nguyen, 2011; Poletti-Hughes & Williams, 2019). The SEW framework argues that family firms aiming at preserving their socioemotional benefits are less willing to take venturing risk (Briano-Turrent & Poletti-Hughes, 2017; Gómez-Mejía et al., 2007; Huybrechts et al., 2013).

The above arguments underline the complexity of the risk-taking in family firms as opposed to non-family firms and advocate for multi-theoretical approaches to this topic. Furthermore, the conflicting evidence on corporate risk taking can be explained by failing to consider the heterogeneity within family firms in terms of resources, objectives, and governance structure (Hiebl, 2013; Jiang et al., 2015). Thus, it is important to understand the differences in risk taking within family firms and the moderating effect of internal governance mechanisms (Llanos-Contreras et al., 2021; Su & Lee, 2013). In this sense, whereas a number of studies based on the agency theory have provided evidence about the impact of the board of directors and the ownership structure on corporate risk-taking (Baulkaran & Bhattarai, 2020; Jiraporn & Lee, 2018; Nakano & Nguyen, 2012; Sila et al., 2016), the role of such mechanisms in family-controlled firms calls for further attention and complementary theoretical lens.

Zhang and Luo (2021), García-Ramos and García-Olalla (2011), and Miller and Le Breton-Miller (2006) show the effectiveness of the board of directors on the family firm's risk-taking activities. Similarly, the presence of some institutional investors in the ownership structure of family firms can mitigate the myopic investment behaviour of the controlling family and guide firms' risk-taking (Chen & Hsu, 2009; De-la-Hoz & Pombo, 2016; Pombo & Taborda, 2017). The institutional investors, given their focus on financial performance, are less emotionally attached to the company's wealth as opposed to the controlling family and can make up for the risk aversion of families (Chang & James, 2020).

According to the agency theory, internal governance mechanisms, such as independent directors and institutional investors, are an important channel for monitoring the family firms' excessive consumption of private benefits (Chang & James, 2020). In this regard, Du et al. (2022) indicate that non-family shareholders and non-family directors make the diversion of resources more costly, reduce the risk of expropriation of minority shareholders' wealth, and therefore guide family

firms towards a risk-taking attitude. Similarly, the controlling family's aversion to SEW losses guides firms toward agency problems between the controlling families and minority shareholders (Gomez-Mejia et al., 2014). Controlling families follow this behaviour because they are powerful investors that enjoy sufficient discretion to safeguard their SEW objectives at the expense of the financial benefits of other shareholders (Berrone et al., 2012). Therefore, it is important to analyse the relationship between the governance structure and the concerns about the opportunistic behaviour of controlling families.

Considering the above-mentioned arguments, we aim to disentangle the differences in the level of risk between family-controlled and non-family-controlled firms and within family-controlled firms by complementing the agency theory with the socioemotional wealth view. Therefore, we attempt to enrich the understanding of the corporate risk-taking of family firms by addressing a number of research questions. Our basal question is whether family firms are different from non-family firms in terms of corporate risk. Then, we try to shed light on the heterogeneity across corporate risk-taking of family firms by focusing on the internal mechanisms of corporate governance. We, therefore, address the following two research questions: Do independent directors moderate the level of risk of family firms? Does the presence of pension funds in the ownership structure moderate the level of risk of family firms?

Chile provides a unique setting to address these questions. The business groups are usual actors whose ownership is typically concentrated in the hands of a number of dominating families (Buchuk et al., 2014; Torres et al., 2017). Furthermore, the Chilean economy is characterized by a high risk of expropriation of minority shareholders' wealth, and the weak investor protection (Santiago-Castro & Brown, 2007; Saona & San Martín, 2018; Saona et al., 2018). Regarding the composition of the board of directors, Chile exhibits distinctive characteristics. According to local regulators, the board of directors is dependent by the ownership structure of

the company. A company must establish a board comprising a minimum of seven members, including one independent director, under the following conditions: i) when equity exceeds 1,500,000 inflation-linked units (equivalent to approximately USD 57 million) and ii) when at least 12.5% of the voting shares are held by shareholders who individually own less than 10% of the shares. Conversely, the Chilean Pension Funds Managers (AFPs, for its acronym in Spanish²⁴) are widespread institutional investors in the Chilean market,²⁵ actively participating in the governance structure of the firms (Bonilla et al., 2010; Saona et al., 2020). According to the institutional investor classification of Panicker et al. (2019) and Ferreira and Matos (2008), Chilean pension funds can be categorised as pressure-resistant investors that provide expertise, greater access to resources, and improve the governance structure. Consequently, Chilean context offer a unique opportunity to disentangle the governance structure's role of family firms in curbing the firm's resource deviation to conservative decisions.

We analyse a sample of 72 Chilean firms between 2005 and 2020. Our baseline result is the strong predictive power of family ownership on the corporate risk-taking. This result suggests that controlling families are undiversified and risk-averse investors on the loss of socioemotional wealth. These powerful and discretionary investors elude financial decisions with a high level of volatility that could jeopardise their socioemotional benefits. We also find that the governance mechanisms shape the risk-avoidance behaviour of family firms. Our results show that independent directors counteract the families' resistance to risky decisions. In the same vein, we find that the shares in the hands of the AFPs lead to higher corporate risk in family firms. Thus, independent directors and local pension funds make up for the families' resistance to projects with high-performance variability

²⁴ *Administradoras de Fondos de Pensiones.*

²⁵ According to the Superintendence of Pension Fund Administrators, the main entity in charge of the Chilean pension fund system, the investment portfolio of the AFPs reached US\$ 214 billion in 2020.

and mitigate agency problems. From SEW's point of view, these outside stakeholders have the independence, knowledge, and resources to push family firms to take riskier but value-increasing decisions. We use market-based measures of risk-taking to capture the market perception of the search for projects with high venturing risk. Controlling families (as opposed to well-diversified shareholders) hold much of their financial and socioemotional wealth in a single company, which generates exposure to firm-specific risk (Chen & Wang, 2019; Roger & Schatt, 2016; Saito, 2008; Schmid et al., 2014).

Our study contributes to the literature in several aspects. First, we shed light on the open discussion about the corporate risk-taking of family firms by reconciling two opposing theoretical insights. Agency theory proposes that controlling families are poorly diversified investors with a disproportionately high level of stake in a company. The presence of family members in senior management positions and on boards of directors allows them to extract wealth from other shareholders by diverting resources to sub-optimal risky decisions. On the other hand, the SEW view states that the controlling family is emotionally attached to the firm and adopts a risk-averse attitude with respect to the non-financial benefits, which is consistent with the idea that controlling families avoid projects with a high level of volatility. Therefore, pursuing financial and personal benefits shapes the risk behaviour of controlling families, which in turn impacts corporate risk. These arguments support the notion that in economies with poor investor protection and less deep and liquid capital markets, the controlling shareholders are more risk-averse to the loss of the company's wealth and more emotionally engaged in their personal benefits (John et al., 2008).

Second, we also contribute by stressing the family firms' governance structure as critical element to understand the corporate risk-taking of these firms. This insight responds to the call of Baulkaran and Bhattarai (2020) and Du et al. (2022). Our results reinforce the idea that non-family directors and non-family shareholders

attenuate the excessive focus of the controlling families on the socioemotional benefits at the expense of the rest of the shareholders, and decrease the bifurcation bias of controlling-families towards low-risk projects (Chang & James, 2020; Du et al., 2022).

Third, to our knowledge this is the first paper that provide evidence on the moderating effect of the board of directors and ownership structure in Latin American family firms' risk-taking. On the one hand, since regulators in many Latin American economies such as Argentina, Brazil, Chile, Colombia, Mexico, and Peru, do not require companies to have a separate risk management committee, independent directors play an important role in the risk-taking decision. On the other hand, the local pension funds in most Latin American countries are the main institutional investors and have a significant impact on the promotion of good governance policies at country and firm levels (OECD/International Finance Corporation, 2011). Hence, our findings have potential application applicability to other emerging economies, notably in the Latin American region, with poor external governance and where controlling families are the dominant investors.

Lastly, we also contribute by providing a more comprehensive construct of family firm that attenuates the ambiguity of this concept in literature. Family ownership is a widely but non-well-defined construct. We carefully operationalise this construct by using a series of systematic steps to classify a company as a family-controlled or non-family-controlled firm. We use a unique hand-collected dataset built from primary and official sources such as different local regulators' databases as well as corporate websites. Such a reliable dataset provides a more precise identification of family-controlled firms.

The remainder of this paper is organised as follows: Section 2 presents an overview of the literature and the testable hypotheses; Section 3 describes the sample, methods, and variables used in our models; Section 4 reports the empirical results

and some robustness analyses; the last section discusses the main conclusions as well as some limitations and suggestions for future research.

4.2 Literature review

4.2.1 Family ownership and risk-taking

Although there is no conclusive evidence on the difference between family and non-family firms in terms of corporate risk-taking (Jiang et al., 2015; Lim et al., 2010; Llanos-Contreras et al., 2021; Merono-Cerdan et al., 2018; Naldi et al., 2007), the problem has been most clearly illuminated by agency theory and socioemotional wealth arguments (González et al., 2021; Huybrechts et al., 2013; Kempers et al., 2019; Martino et al., 2020).

The agency theory has stereotyped family-controlled firms as less willing to take risks than their non-family counterparts. Controlling families hold much of their wealth in a single company; hence they have a risk of exposure to the company's wealth and avoid any high-risk activity that could jeopardise their source of wealth (Anderson et al., 2012; Bertrand & Schoar, 2006; Naldi et al., 2007; Su & Lee, 2013). Due to the undiversified nature of controlling families, the extraction of private benefits of control compensates for the systemic and idiosyncratic risk these families assume (Roger & Schatt, 2016). Moreover, controlling families possess sufficient voting power to appoint family members to senior management or board positions and thus encourage low-risk projects as a channel to extract wealth from other shareholders (Boubaker et al., 2017; Burkart et al., 2003). In addition, other particularities of family-controlled firms, such as the limited access to external funds and the lack of knowledge and experience to manage risk-taking activities, are also significant sources of strategic inertia and lead to the negative relationship between family ownership and corporate risk-taking (König et al., 2013; Muñoz-Bullón & Sanchez-Bueno, 2011).

Alternatively, families can also prioritise transferring control of their companies to the next generations over enjoying the financial benefits of control, which guide family firms towards low-risk activities (Anderson & Reeb, 2003; Bianco et al., 2013; Boubaker et al., 2016). For instance, family firms are less willing to undertake R&D investments or acquisitions because of their high-variance nature and aversion of control loss (Anderson et al., 2012; Caprio et al., 2011; Chen & Hsu, 2009; Croci et al., 2011).

Contrary to the agency theory, SEW's arguments point out that the risk-taking of family firms is shaped by the gains or losses of personal and non-financial benefits (Berrone et al., 2012). On the one hand, families are more sensitive to non-financial and personal losses than to financial losses, so they accept higher levels of performance hazard risk, i.e., an increase in the likelihood of bankruptcy, to preserve their socioemotional wealth (Gómez-Mejía et al., 2007; Llanos-Contreras et al., 2021). The long-term orientation of families does not generate risk aversion but rather encourages risky projects provided this strategy preserves the family resources for future generations instead of sharing it with other shareholders or lenders (Poletti-Hughes & Williams, 2019). On the other hand, controlling families are risk averse in terms of venturing risk. Chang and James (2020), Gomez-Mejia et al. (2014) and Panicker et al. (2019) report evidence that family firms are less willing to undertake decisions with a high level of venture risk such as restructuring activities, R&D, and international investments. Gomez-Mejia et al. (2014) add that controlling families prefer to avoid the loss of control, typically associated with this type of investment, rather than obtaining volatile benefits in the future. Chrisman and Patel (2012) report similar results because R&D investment leads to a dilution of family ownership and loss of family discretion due to the entry of nonfamily investors and senior managers, resulting in a decrease of the SEW. Similarly, Boellis et al. (2016) find that families prefer investment alternatives that allows maintaining the family management style and reducing the risk of losing control when facing risky strategies such as the choice of foreign markets.

In the Latin American case, the evidence is also mixed. Following the agency framework, González et al. (2013) identify two drivers of Colombian family-controlled firms: the risk aversion and the need to finance growth without losing control. Similarly, Bonilla et al. (2010) report that Chilean family firms have lower variability or risk than non-family firms. In contrast, and consistent with the SEW perspective, Llanos-Contreras et al. (2021) and Poletti-Hughes and Williams (2019), using a sample of Chilean and Colombian firms respectively, find evidence that controlling families guide firms towards higher levels of performance hazard in order to improve their long-term competitive position and safeguard their socioemotional wealth.

Therefore, the above-mentioned arguments point out that family firms are averse to venturing risks, i.e., they are particularly interested in avoiding projects with a high level of volatility. Consequently, our first hypothesis postulates that:

Hypothesis 1a (H1a): The ownership in the hands of the family firms is negatively related to corporate risk

Ownership is not the only means of family involvement in firms; it can be complemented by family participation in the board of directors, senior management, and advisory boards (Gottardo & Moisello, 2017; Jones et al., 2008; Nguyen, 2011). In this sense, excessive emphasis on avoiding SEW losses can also result in negative effects such as nepotism, the preference for family members over more qualified or experienced directors, and the lack of board expertise for the efficient risk management (Berrone et al., 2012; Muñoz-Bullón & Sanchez-Bueno, 2011). Consequently, family directors may prefer less risky projects to preserve family wealth, despite the potential detrimental impact on the wealth of other shareholders (Schulze et al., 2003; Su & Lee, 2013). Similarly, high levels of nepotism reduce the meritocracy in the directors' recruitment process and demotivate non-family directors to take high-risk decisions (Lorenzo et al., 2022). This fact is exacerbated because family directors are less willing to take risks that

could disrupt strategic inertia, as they fear that their specific human capital will not be adaptable outside of the firm (Bammens et al., 2011; Bauguess et al., 2012; Hafner & Pidun, 2022). Therefore, family directors lead the board to fail in its original monitoring duties, resulting in a more disagreement between controlling families and minority shareholders in terms of the firm's risk-taking (Su & Lee, 2013).

Hence, echoing hypothesis H1a, we propose that family involvement in the board of directors can guide the firm towards low-risky activities in order to safeguard the family's power and wealth.

Hypothesis 1b (H1b): The presence of the family on the board of directors of family firms is negatively related to corporate risk

4.2.2 Independent directors and risk-taking of family firms

The composition and characteristics of the board of directors explain a large part of the heterogeneity in family firms and are an important channel for monitoring the controlling family decisions (Bammens et al., 2011; Zhang & Luo, 2021). From this perspective, the role of independent directors in family-controlled firms is to alleviate agency problems and safeguard the minority shareholders' wealth (Chen & Hsu, 2009). They are a significant source of the board effectiveness and play a valuable governance role by monitoring senior management and constraining family discretionary decisions (Anderson & Reeb, 2004; Palmberg, 2015). In this sense, one of the duties of independent directors is to oversee risk-taking decision-making (Gottardo & Moisello, 2017; Palmberg, 2015). Independent directors are more expert at evaluating corporate risk-taking, which can help family firms make better-informed decisions about their corporate risks (Voordeckers et al., 2007). Following the same line, Su and Lee (2013) provide evidence that independent directors have the potential to contribute external experience and knowledge in managing risky decisions, such as R&D investments. Indeed, Chen

and Hsu (2009) argue that families tend to welcome the objective and professional guidance provided by independent directors, which encourages a disposition toward risk ventures. Additionally, the authors establish that independent directors gain better access to external financing sources for risky projects. Therefore, independent directors are more likely to counterbalance the myopic investment behaviour of controlling families and reduce the deviation of the firm's resources to low-risk projects. Thus, our second hypothesis is as follows:

Hypothesis 2 (H2): The independence of the board of directors attenuates the reluctance of family firms to corporate risk.

4.2.3 Chilean Pension Fund Managers (AFPs) and risk-taking of family firms

Controlling families and institutional investors are driven by different objectives since family shareholders focus on socioemotional goals, while institutional investors prefer financial goals (Abinzano et al., 2021; Chang & James, 2020; Fernando et al., 2014). Despite the risk of disagreement, institutional investors balance the socioemotional objectives of the controlling families with the financial objectives of the rest of the shareholders by encouraging high-risk venture decisions (Gomez-Mejia et al., 2014). Additionally, institutional investors improve the corporate governance to alleviate family entrenchment issues (Chang & James, 2020). Notably, pension funds play a unique role in promoting corporate governance practices across several economies (De-la-Hoz & Pombo, 2016). One noteworthy characteristic of pension funds is that they are less susceptible to the pressure exerted by controlling shareholders or inside managers because they do not have business ties with the company (Elyasiani & Jia, 2010; Panicker et al., 2019; Ruiz-Mallorquí & Santana-Martín, 2011). In addition, pension funds are more conscientious (as opposed to other investors) than controlling families use risky decision-making as a means to prioritize their socioemotional benefits over financial benefits of other shareholders (Fernando et al., 2014).

Particularly, the Chilean pension funds can discipline the family firms through their voice activism or the threat of selling shares. They can influentially intervene investors in the shareholders have access to capital markets, such that they should be taken into account in the decision-making process (Araya et al., 2015). Therefore, these long-term-oriented investors can counterbalance the discretionary behaviour of controlling families and, consequently, influence the risk level of family firms. This leads to our third hypothesis:

Hypothesis 3 (H3): The presence of pension funds in the ownership of family firms attenuates the reluctance of these firms to corporate risk.

4.3 Data, variables, and model

4.3.1 Sample and sources of information

Our sample consists of an unbalanced panel of 802 firm-year observations from 72 companies listed on Chile's Santiago Stock Exchange (BCS) between 2005 and 2020²⁶. Companies with negative equity value are excluded from the sample due to their abnormal levels of risk. The sample includes both active and inactive firms to avoid the survivorship bias. To manage the low liquidity of the Chilean market, we only consider companies whose stocks are traded on at least 70% of business days. Additionally, we only consider days with stock exceeding USD 100. The sample accounts for 72% of the market capitalisation of the non-financial firms listed on the Santiago Stock Exchange.²⁷ Financial information was obtained from *Refinitiv Eikon*, while family, date of company's foundation, and corporate governance variables were obtained by hand from articles of incorporation, annual reports, minutes of the annual and extraordinary general meeting, and Chilean

²⁶ The available data limited the information to this specific period of time.

²⁷ As it is usual in this type of research, we have excluded financial (NAICS Code 52) and real estate rental and leasing companies (NAICS Code 53).

regulators' reports, among other sources. The board composition, the ownership structure, and the stake held by Chilean Pension Fund Managers were obtained manually from the annual reports and the Chilean Superintendence of Pension Fund Administrators' annual reports; we have also collected information concerning the firm being affiliated to a business group from the Financial Market Commission of Chile. Table 20 presents the distribution of firms in the different industrial sectors. We can see that the families (as explained in section 3.3) control 50% of the firms.

Table 20. Distribution of family and non-family firms by two-digit NAICS Code

NAICS Sector Name	Non- Family Firms	Family Firms	Total
Agriculture, Forestry, Fishing and Hunting	3 (8.33)	2 (5.56)	5 (6.94)
Mining	1 (2.78)	1 (2.78)	2 (2.78)
Utilities	11 (30.56)	1 (2.78)	12 (16.67)
Construction	1 (2.78)	4 (11.11)	5 (6.94)
Manufacturing	7 (19.44)	16 (44.44)	23 (31.94)
Wholesale Trade	0 (0.00)	2 (5.56)	2 (2.78)
Retail Trade	3 (8.33)	7 (19.44)	10 (13.89)
Transportation and Warehousing	1 (2.78)	2 (5.56)	3 (4.17)
Information	3 (8.33)	0 (0.00)	3 (8.33)
Professional, Scientific, and Technical Services	0 (0.00)	1 (2.78)	1 (1.39)
Health Care and Social Assistance	2 (5.56)	0 (0.00)	2 (5.56)
Arts, Entertainment, and Recreation	3 (8.33)	0 (0.00)	3 (4.17)
Accommodation and Food Services	1 (2.78)	0 (0.00)	1 (1.39)
Total	36 (50.00%)	36 (50.00%)	72 (100.00%)

This table reports the number (percentage) of family and non-family firms by two-digit North American Industry Classification System (NAICS) Code.

4.3.2 Risk measures

Based on prior research, we use two main measures of corporate risk: total risk and idiosyncratic risk (Anderson & Reeb, 2003; Ferreira & Laux, 2007; Lee et al., 2018; Low, 2009; Nguyen, 2011; Pathan, 2009). Total Risk (TR) is calculated as

the annualised standard deviation of daily stock returns over the last year. If a company has more than one type of stock, we choose the one with the highest level of liquidity. Daily returns ($r_{i,t}$) were measured as $r_{i,t} = (P_{it} - P_{it-1})/P_{it-1}$, where P_{it} is the stock price for the firm i on the day t and P_{it-1} is the stock price for the firm i on the day $t - 1$. The price are denominated in U.S. dollars and the returns are adjusted for dividends and stock splits. Idiosyncratic Risk (IR) is calculated as the annualised standard deviation of residuals from the Market Model over the last year. We estimate this model using the following equation:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

where R_{it} is the stock return for the firm i for the period t , R_{mt} is the return of S&P CLX IPSA market index for the period t , α_i is the constant term, β_i is a measure of the stock price sensitivity for firm i to movements in the market, and ε_{it} is the error term. The idiosyncratic risk is firm-specific and can be influenced by the controlling family through various financial decisions. As a robustness check, we run the same regressions by estimating the market model with monthly returns. The results are similar and not reported for brevity.

4.3.3 Explanatory variables

In this type of studies, the determination of the family ownership in the firm is a key issue and can explain the differences in the findings (Arregle et al., 2017). We use three measures of the involvement of the family. The first one (FAM), is a dummy variable that equals 1 if the firm is controlled by the family, and 0 otherwise. We follow a series of steps to classify the company as a family-controlled or non-family-controlled firm. The first step was to identify the date of foundation and name(s) of the founder(s) from the Chilean Financial Market Commission's Documentation Centre for listed companies. Similarly to Villalonga and Amit (2006), we use four different definitions of the founding family: i) The

most common situation is a person who creates their own business²⁸; ii) In case of merger, acquisition, or spin-off, the founder will be the controlling shareholder of the successor company²⁹; 3) A founder is also an individual or family that acquired the company after its foundation but is responsible for the survival and actual success of the company³⁰; and 4) If there are two or more individuals who qualify in the three aforementioned categories, we consider the largest shareholder as the founder³¹.

We also consider the possibility that the founder(s) of the company are not the current firm's leaders because they are no longer alive, or the firm has gone through an intergenerational succession process. Therefore, the second step was to identify the successors of the founder(s) by blood or marriage through the Civil Registry and Identification Service of Chile (public entity in charge of providing information on marital status, births, marriages, deaths, among others) or the company's annual reports. The third step was to identify the controlling shareholder, if any. We assume that a shareholder controls a company when it owns at least 20% of the voting rights. In the fourth step, we link the third step with the first or second step to identify whether the controlling shareholder, if any, is the founder or a descendant of the family. Finally, we check whether at least one member of the founding family is on the board of directors or senior management. In line with previous studies on emerging markets context (Briano-Turrent et al., 2020; Llanos-Contreras et al., 2021; Poletti-Hughes & Williams, 2019; Samara & Berbegal-

²⁸ For instance, *Besalco* was founded by Victor Bezanilla in 1944 and, after his death in 1991, the firm's control was transferred to his children.

²⁹ For example, *Viña San Pedro* (founded in 1865 by José Correa and owned by the Luksic family) merged with *Viña Tarapacá* (founded in 1874 by Francisco de Rojas and owned by José Vender and Gustavo Romero) in 2008, resulting in *Viña San Pedro Tarapacá*. Then, the Luksic family became the main shareholder of the merged company

³⁰ *Empresas Copec* was founded by Enrique Costabal in 1934. In the 1980s, the company experienced financial problems that endangered its survival. In this context, the control of the company was sold to Anacleto Angelini, who recovered the company's stability and has managed to position it as the largest fuel distributor in Chile.

³¹ *Cementos Bío Bío* was founded in 1957 by Hernán Briones and Alfonso Rozas. During the 2005-2019 period, the Briones family was the controlling shareholder with about 50% of the shares, while the Rozas family owned about 10% of the shares.

Mirabent, 2018; Zhang & Luo, 2021), the minimum threshold of 20% ensures that the founding family has an effective influence on the firm's management. A lower ownership stake could generate the erroneous identification of a company as family-owned when the founding family is not actively involved on risk-taking decision-making.

The second measure of family involvement in ownership is the percentage of ownership in the hands of any member of the founding-family's (FAM OWN). We also consider the stocks held by individuals related to the family by marriage. We use a similar procedure to identify whether any founding-family member holds a position on the board of directors. We match the names of the board members obtained from the annual reports with the names of the founder or descendants. Then, we define family involvement in the board as the share of founding-family directors relative to the total board members (FAM DIR).

We define the board independence (IND) as the ratio of independent directors to the total number of board members. Independent directors are those who do not have ties to the company or founding family beyond their position within the board (Samara et al., 2018). We introduce the involvement of pension funds with PF OWN, which is the percentage of ownership held by Chilean Pension Fund Managers (AFPs).

4.3.4 Control variables

We control for a number of firm-level issues that could influence corporate risk-taking: leverage, size, performance, investment, age, and business groups (Baulkaran & Bhattarai, 2020; Boubaker et al., 2016; Du et al., 2022; Lee et al., 2018; Llanos-Contreras et al., 2021; Mishra, 2011; Nguyen, 2011; Zhang & Luo, 2021). LEV is the ratio of total liabilities to total assets; SIZE is the natural logarithm of total assets; ROA is the ratio of net income to total assets; CAPEX is the ratio of capital expenditures to total assets; AGE is the natural logarithm of

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years after the foundation of the company; and finally, BG is a dummy variable that takes value 1 if the firm belongs to a business group, and 0 otherwise.

Table 21 summarises the definition and sources of the variables. We winsorise all continuous variables at the 1% level in both tails to mitigate the influence of outliers.³²

Table 21: Definition of variables

Variables	Abbreviation	Measure	Source
Dependent variables (Risk)			
Total Risk	TR	Annualised standard deviation of daily stock returns	Refinitiv Eikon
Idiosyncratic Risk	IR	Annualised standard deviation of residuals from the Market Model	Refinitiv Eikon
Independent variables			
Family firm	FAM	Dummy variable that equals 1 if the firm is controlled by the family, and 0 otherwise	Hand collected from articles of incorporation, annual reports, minutes of the annual and extraordinary general meeting, and Civil Registration and Identification of Chile
Family ownership	FAM OWN	Percentage of ownership in the family's hands	
Family board members	FAM DIR	Share of family directors relative to the total board members	
Independent board members	IND	Ratio of independent directors to total board members	Hand collected from annual reports and minutes of the annual and extraordinary general meeting
Chilean Pension Fund Managers (AFPs) ownership	PF OWN	Ownership held by AFPs	Hand collected from firm's annual reports and Superintendence of Pension Fund Administrator's annual reports
Financial leverage	LEV	Ratio of total liabilities to total assets	Refinitiv Eikon
Size	SIZE	Natural logarithm of total assets	Refinitiv Eikon
Profitability	ROA	Ratio of net income to total assets	Refinitiv Eikon
Capital expenditures	CAPEX	Ratio of capital expenditures to total assets	Refinitiv Eikon
Age	AGE	Natural logarithm of years after the foundation of the company	Hand collected from articles of incorporation, and annual reports
Business group	BG	Dummy variable that equals 1 if the firm belongs to a business group, and 0 otherwise	Hand collected from Financial Market Commission of Chile's report

³² The results are similar if the observations are not winsorised. To save space, these results are not reported in the study.

4.3.5 Model and method

By combining time series with cross-section data, we construct a panel dataset of observations of each firm i in different points of time t . Panel data methodology allows us to control for firms fixed effects and unobservable heterogeneity (Baltagi, 2013). The firm's risk may depend on unobservable firm-specific aspects that remain constant over time, such as entrepreneurial culture and family attitude towards risk. We use Equations 2 and 3 to estimate our hypotheses. We propose Equation 2 to test the impact of family involvement in ownership and board of directors on corporate risk taking (H1a and H1b):

$$\text{Risk} - \text{Taking}_{it} = \beta_0 + \beta_1 \text{FAM/FAM OWN/FAM DIR} + \omega_k X_{it} + \gamma_i + \lambda_t + \varepsilon_{it}, \quad (2)$$

where Risk – Taking_{it} are the two measures of corporate risk taking: Total Risk (TR) and Idiosyncratic Risk (IR). FAM is the dummy variable that equals 1 if the firm is controlled by the family, FAM OWN is the percentage of ownership in the hands of the family, and FAM DIR is the family directors relative to total board members. ω_k are the control variables: Financial leverage (LEV), size (SIZE), profitability (ROA), capital expenditures (CAPEX), age (AGE), and business group (BG). Additionally, all the models include unobservable industry-specific effects (γ_i) and year dummies (λ_t) to control for industry and time effects, respectively. ε_{it} is the stochastic error in the estimations.

We use Equation 3 to estimate the moderating role of independence directors (IND DIR) and pension funds' ownership (PF OWN) in the relationship between family ownership and corporate risk-taking:

$$\begin{aligned} \text{Risk} - \text{Taking}_{it} &= \beta_0 + \beta_1 \text{IND DIR} \times \text{FAM/PF OWN} \times \text{FAM} \\ &+ \beta_2 \text{IND DIR/PF OWN} + \beta_3 \text{FAM} + \omega_k X_{it} + \gamma_i + \lambda_t + \varepsilon_{it}, \end{aligned} \quad (3)$$

We run two-step Generalised Method of Moments (GMM) system proposed by Arellano and Bover (1995), and Blundell and Bond (1998) to address endogeneity and reverse causality. This methodology is based on the instrumental variables and allows us to use as instruments lagged right-hand side variables to deal with the possible endogeneity. The two-step GMM system improves the original GMM procedure by enhancing estimations with instruments in both levels and differences. The consistency of the GMM estimates depends on the validity of the instruments and the absence of second-order serial correlation. Therefore, we also report the tests of joint validity of the selected instruments (Hansen test) and second-order autocorrelation (AR2).

4.4 Results

4.4.1 Descriptive statistics

Table 22 shows the mean, median, standard deviation, minimum and maximum, as well as the test of mean differences between companies controlled by the families and those that are not. The TR and IR average is 0.322 and 0.272, respectively. On average, 54.0% of the observations in our sample can be considered family-owned, according to the FAM variable. The fraction of shares owned by the family (FAM OWN) is 31.6% and 14.7% of directors belong to the family (FAM DIR). Independent directors (IND) account for 22.0% of the total board members. This percentage is relatively low because Chilean listed companies that are required to have independent directors must have at least one. The Pension Funds have an average ownership (PF OWN) of 6.3%. On average, the financial leverage (LEV) is 28,6%, the size (SIZE) 14.372 (1,745 million of dollars), the profitability (ROA) 3.9%, and capital expenditures (CAPEX) 5.2%. The average age (AGE) is 3.84 (46.5 years), and 75.2% of the companies in the sample belong to a business group (BG).

The mean difference test reports that the family firms present a lower level of risk in the two measures of risk-taking, which is in line with our hypothesised negative relationship between familiness and corporate risk. Additionally, the fraction of shares owned by the family is 58.5%, confirming the high concentration of ownership in the Chilean listed firms. On average, family firms have more independent boards than non-family firms. Family firms may consider the positive impact of independent directors on the value of the firms. However, family firms have more directors belonging to the family (27.3%) than independent directors (22.9%). Family firms (as opposed to non-family firms) also are larger, older, have a lower level of CAPEX, and are less likely to belong to a business group.

Table 22. Descriptive statistics

Variable	Mean	Median	Std. Dev.	Min	Max	Mean Difference Test		
						No Fam	Fam	Difference
TR	0.322	0.286	0.136	0.164	0.925	0.340	0.306	0.034***
IR	0.272	0.234	0.137	0.121	0.921	0.295	0.253	0.043***
FAM	0.540	1.000	0.499	0.000	1.000	0.000	1.000	-1.000***
FAM OWN	0.316	0.390	0.309	0.000	0.953	0.000	0.585	-0.585***
FAM DIR	0.147	0.111	0.176	0.000	0.714	0.000	0.273	-0.273***
IND	0.220	0.143	0.154	0.000	1.000	0.209	0.229	-0.020*
PF OWN	0.063	0.000	0.098	0.000	0.449	0.050	0.074	-0.024***
LEV	0.286	0.290	0.138	0.000	0.642	0.565	0.550	0.013
SIZE	14.372	14.362	1.530	10.542	17.745	14.178	14.537	-0.358***
ROA	0.039	0.035	0.084	-0.290	0.427	0.038	0.041	-0.003
CAPEX	0.052	0.043	0.043	0.001	0.215	0.059	0.047	0.011***
AGE	3.840	3.932	0.802	0.169	5.090	3.708	3.953	-0.246***
BG	0.752	1.000	0.432	0.000	1.000	0.783	0.725	0.058*

Mean, median, standard deviation, minimum, maximum, and differences of means between family and non-family firms. For variable definitions, see Table 2. ***, **, and * for 1%, 5%, 10% significance level. The number of observations is 802.

Table 23 presents the correlation matrix. Both risk-taking metrics, TR and IR, exhibit a positive correlation with financial leverage (LEV). Conversely, these risk-taking measures display a negative correlation with firm size (SIZE) and return on assets (ROA). This table indicates that the correlation among the independent variables is low. In any case, we use the Variance Inflation Factor (VIF) post-estimation test to check the absence of multicollinearity. All regressions present a VIF lower than 2, so multicollinearity is not a problem in our estimates.

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Table 23. Correlation matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) TR	1.000												
(2) IR	0.935 ***	1.000											
(3) FAM	-0.136	-0.190 *	1.000										
(4) FAM OWN	-0.235 **	-0.280 **	0.933 ***	1.000									
(5) FAM DIR	-0.043	-0.115	0.724 ***	0.757 ***	1.000								
(6) IND	-0.011	-0.109	0.124	-0.007	0.068	1.000							
(7) PF OWN	0.329 ***	0.360 ***	0.165	0.016	-0.077	-0.084	1.000						
(8) LEV	0.356 ***	0.281 **	-0.018	-0.092	0.077	0.311 ***	0.064	1.000					
(9) SIZE	-0.016	-0.257 **	0.145	0.128	0.165	0.226 *	-0.245 **	0.447 ***	1.000				
(10) ROA	-0.290 **	-0.278 **	-0.023	0.061	-0.011	-0.146	-0.090	-0.324 ***	-0.151	1.000			
(11) CAPEX	-0.129	-0.108	-0.239 **	-0.130	-0.252 **	-0.123	-0.037	0.010	-0.022	0.192 *	1.000		
(12) AGE	0.077	0.002	0.155	0.088	0.092	0.078	-0.118	0.166	0.290 **	-0.094	-0.284 **	1.000	
(13) BG	-0.010	-0.122	-0.088	-0.057	-0.186	-0.156	-0.129	-0.012	0.356 ***	0.203 *	0.053	0.053	1.000

Correlation coefficients. For variable definitions, see Table 2. ***, **, and * for 1%, 5%, 10% significance level. The number of observations is 802.

4.4.2 Multivariate analysis

Although our work focuses on the impact of various governance mechanisms on the risk of family firms, we first analyse the impact of family ownership on that level of risk. Table 24 reports the results concerning to H1a and H1b. In columns 1, 3, 5 and 7, we use the total risk measure, while in columns 2, 4, 6 and 8, we use the idiosyncratic risk measure obtained from equation (1). First of all, columns 1 and 2 show the regressions using only the control variables. The coefficients of the control variables are coherent with our expectations and with prior literature too. Financial leverage (LEV) is positive and significantly related to corporate risk due to the higher probability of financial insolvency (Lee et al., 2018). At the same time, the SIZE variable presents a negative relationship. It means that larger firms have less risk may be because they have more possibilities for diversification (Anderson & Reeb, 2003; Ferreira & Laux, 2007). ROA is negatively related to corporate risk, which could indicate that companies with lower profitability take up risky but profitable projects to improve their financial condition. Similar results have been reported by Serfling (2014) and Sila et al. (2016). CAPEX has a negative and significant impact on corporate risk. Unlike R&D investments, CAPEX expenses are related to tangible assets, generate more predictable cash flows and, therefore, decrease corporate risk. Finally, AGE and BG coefficients are not statistically significant.

Columns 3 to 8 report evidence that firm familiness is negatively related to firm risk, irrespective of the measure of risk we choose: in columns 3-4 the coefficient of the dummy variable FAM is negative and significant, and in columns 5-6 we report similar results when we use the fraction of equity owned by the family. Thus, the relationship between family control and firm risk is negatively and statistically significant. These results are also economically significant.³³ Family-controlled

³³ We scale the model's coefficients by the standard deviation of the dependent variable instead of the mean to measure their economic magnitude. See Mitton (2022) for more details.

firms have a 82.35%³⁴ (89.05%) standard deviation decrease in TR (IR) compared to non-family-controlled firms. These result supports the H1a and is in line with those of Boubaker et al. (2016), who find that controlling families avoid risky projects due to their inefficient diversification. Furthermore, the greater the ownership in the hands of the family, the lower the risk taken by the company. In this way, we confirm the findings of Mishra (2011), who shows that in countries with weak investor protection, large shareholders take advantage of their dominant power to extract wealth from minority shareholders through investment projects with too low risk. The results are also consistent with the idea that the controlling family try to decrease corporate idiosyncratic risk in order to reduce family's exposure to risk (Faccio et al., 2011). In terms of economic significance, a one standard deviation increase in FAM OWN is associated with 42.99%³⁵ (45.58%) standard deviation decrease of TR (IR).

Table 24 also reports the estimates for H1b concerning the effect of the family directors. Columns 7 and 8 show that the presence of family directors on the board (FAM DIR) is negatively related to firm risk-taking. A one standard deviation change in FAM DIR means a 22.98% (37.40%) standard decrease in TR (IR). Accordingly, the involvement of the founding family in the form of family directors leads to a more conservative managerial style with lower corporate risk, as stated in H1b. These findings support the argument that when a family has a significant involvement in the board of directors, they are more likely to avoid SEW losses, which reduces the probability of pursuing uncertain ventures (Wang et al., 2022).

³⁴ We estimated this value as the ration of the coefficient of FAM to the standard deviation of total risk: $-82.35\% \left(\frac{-0.1120}{0.136} \right)$. We use the same procedure for FAM DIR variable.

³⁵ This value is calculated as the ratio of the coefficient of FAM OWN multiplied by the standard deviation of FAM OWN relative to the standard deviation of TR: $-42.99\% \left(\frac{-0.1892 \times 0.309}{0.136} \right)$.

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Table 24: Family ownership, family directors and risk-taking

Variables	(1) TR	(2) IR	(3) TR	(4) IR	(5) TR	(6) IR	(7) TR	(8) IR
FAM			-0.1120 *** (0.0202)	-0.1220 *** (0.0244)				
FAM OWN					-0.1892 *** (0.0395)	-0.2021 *** (0.0419)		
FAM DIR							-0.1776 *** (0.0527)	-0.2911 *** (0.0668)
LEV	0.3460 *** (0.0548)	0.3423 *** (0.0495)	0.3770 *** (0.0298)	0.3528 *** (0.0430)	0.3880 *** (0.0442)	0.2803 *** (0.0447)	0.3906 *** (0.0617)	0.2983 *** (0.0463)
SIZE	-0.0611 *** (0.0079)	-0.0682 *** (0.0086)	-0.0519 *** (0.0090)	-0.0558 *** (0.0113)	-0.0495 *** (0.0118)	-0.0579 *** (0.0120)	-0.0557 *** (0.0080)	-0.0497 *** (0.0111)
ROA	-0.4426 *** (0.0628)	-0.5156 *** (0.0563)	-0.3634 *** (0.0804)	-0.3708 *** (0.0787)	-0.4351 *** (0.0879)	-0.5528 *** (0.0885)	-0.4792 *** (0.0473)	-0.5567 *** (0.0717)
CAPEX	-0.5406 *** (0.1725)	-0.2920 * (0.1759)	-0.7001 *** (0.2059)	-0.4794 ** (0.2278)	-0.6195 ** (0.2447)	-0.2743 * (0.1042)	-1.0652 *** (0.2089)	-0.1498 * (0.0905)
AGE	0.0060 (0.0198)	0.0068 (0.0203)	-0.0557 (0.0358)	-0.0451 (0.0310)	-0.0450 (0.0299)	-0.0176 (0.0267)	0.0061 (0.0165)	-0.0220 (0.0195)
BG	-0.0135 (0.0317)	-0.0171 (0.0244)	0.0664 (0.0427)	0.0411 (0.0332)	0.0863 *** (0.0261)	0.0422 (0.0344)	0.0143 (0.0372)	0.0139 (0.0300)
Intercept	0.8704 *** (0.1076)	1.0061 *** (0.1284)	1.0761 *** (0.0780)	1.2378 *** (0.1020)	1.0865 *** (0.0985)	1.1722 *** (0.1329)	1.1201 *** (0.1245)	1.0383 *** (0.1156)
AR(2) p-value	0.399	0.240	0.32	0.16	0.40	0.23	0.29	0.23
Hansen test (χ^2)	45.38	44.07	40.82	45.04	45.99	44.32	47.80	37.35
F-test p-value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000

Estimated coefficients (standard errors) from equation (2) by using the two-step system GMM. For variable definitions, see Table 2. ***, **, and * for 1%, 5%, 10% significance levels. AR(2) is a test for second-order serial correlation. Hansen test checks the validity of fixed effects estimation. F-test is a test for the joint significance of the independent variables. All the regressions include time dummy variables. The number of observations is 802.

In Table 25 we report the estimates for H2 and H3. The regressions in columns 1 and 2 concern H2. We define $IND \times FAM$ as the interaction between board independence (IND) and familiness (FAM). Similar to Baulkaran and Bhattarai (2020), we find that board independence is negatively related to corporate risk. Pathan (2009) and Wu et al. (2019) indicate that independent directors are constantly pressured and supervised in their work within the board, which leads them to act conservatively and avoid risky decisions. Interestingly, the interacted variable $IND \times FAM$ has a positive as well as a statistically and economically significant, supporting the H2. We report that in family firms, a one standard

deviation increase is associated with a 23.58%³⁶ (32.21%) increase in the standard deviation of TR (IR). This can be a two-folded finding. On the one hand, it means that independent directors play a specific role in family firms and counteract the reluctance of the families to take risk. Thus, whereas independent directors mainly reduce the risk of the firms, they encourage riskier projects that could benefit all the shareholders in family-controlled firms. A possible motivation of this result is given by Palmberg (2015), who reports that independent directors have better skills and knowledge for risk management than family directors. Conversely, the positive coefficient of IND x FAM coupled with the negative of IND could be analysed. From this point of view, family firms seem to be an environment that reverts the risk aversion of independent directors.

Columns 3 and 4 report the results of H3 concerning the influence of institutional investors. In addition to the proportion of shares held by the Chilean Pension Funds Managers (PF OWN) we introduce an interacted variable (PF OWN × FAM) between the familiness and the participation of pension funds. Coherently with the above-described results, the coefficient of FAM is significant and negative. We also find that PF OWN variable is negatively related to corporate risk-taking. According to Chilean laws, the investments made by AFPs must be approved by the Risk Assessment Committee. Consequently, these institutional investors may be reluctant to take much risk, which explains the negative coefficient of PF OWN. Another interesting result is the significant and positive coefficient of the interacted variable PF OWN × FAM, which proves that the ownership held by pension funds makes up for the reluctance of families to risk-taking, as states H3. A one standard deviation change of PF OWN in family firms means a 32.95% (40.87%) standard deviation increase in TR (IR). Hence, pension funds seem to assume a double role: whereas broadly they try to avoid the risk of the firms in whose ownership they

³⁶ This value is calculated as the ratio of the marginal effect of the independent directors' measure in family firms multiplied by the standard deviation of IND relative to the standard deviation of TR: $-23.58\% \left(\frac{0.2082 \times 0.154}{0.136} \right)$. We follow the same procedure for the other interactive terms.

participate, in family firms —that are supposed to take under-optimal risks— they support risk-seeking policies in order to make up for the risk reluctance of family-controlling shareholders. These results hold irrespective of the measure of risk. Thus, Chilean AFPs seem to have the knowledge and the independence to counteract the controlling family resistance to take risks. Our results partially support those of Panicker et al. (2019), who find that pressure-resistant institutional investors promote high-risk activities in family firms, such as foreign investments. In this way, similar to Chang and James (2020), we report evidence that family investors and institutional investors, while being motivated by different goals, can coexist within family-controlled firms and encourage risky activities that improve the competitive position of the firm.

Table 25: Independent directors, pension fund ownership and risk-taking of family firms

Variables	(1) TR	(2) IR	(3) TR	(4) IR
IND × FAM	0.3647 ** (0.1685)	0.4189 ** (0.2040)		
IND	-0.3737 *** (0.0899)	-0.3857 *** (0.1085)		
PF OWN × FAM			0.4936 ** (0.1935)	0.6528 *** (0.1431)
PF OWN			-0.3477 ** (0.1406)	-0.4236 *** (0.1105)
FAM	-0.1565 * (0.0802)	-0.1324 * (0.0717)	-0.0363 * (0.0209)	-0.0815 *** (0.0284)
LEV	0.3579 *** (0.0620)	0.2071 *** (0.0601)	0.4139 *** (0.0630)	0.3510 *** (0.0739)
SIZE	-0.0737 *** (0.0250)	-0.0868 *** (0.0156)	-0.0561 *** (0.0098)	-0.0706 *** (0.0118)
ROA	-0.3786 *** (0.0689)	-0.5802 *** (0.1151)	-0.4784 *** (0.1098)	-0.5589 *** (0.1038)
CAPEX	-0.2236 ** (0.1117)	-0.1647 * (0.0984)	-0.2550 * (0.1493)	-0.0475 (0.1628)
AGE	0.0670 (0.0404)	0.0632 * (0.0320)	-0.0193 (0.0247)	0.0054 (0.0192)
BG	0.2175 (0.1432)	0.1756 (0.1480)	-0.0402 (0.0377)	-0.0476 (0.0428)
Intercept	0.8378 *** (0.1979)	0.7920 *** (0.2986)	0.9619 *** (0.1358)	1.1628 *** (0.1342)
AR(2) p-value	0.30	0.08	0.47	0.28
Hansen test (χ^2)	34.29	38.67	47.12	44.69

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F-test p-value	0.00	0.00	0.00	0.00
Estimated coefficients (standard errors) from equation (3) by using the two-step system GMM. ***, **, and * for 1%, 5%, 10% significance level. AR(2) is a test for second-order serial correlation. Hansen test checks the validity of fixed effects estimation. F-test is a test for the joint significance of the independent variables. All the regressions include time dummy variables. The number of observations is 802.				

To sum up the previous results, family control (both in terms of ownership and directorships) results in lower risk taking. Nevertheless, both the ownership structure and the board of directors can be efficient corporate governance mechanisms to attenuate this agency problem. The board independence and the shares held by Chilean pension funds promote risky projects in family-controlled firms. Our results confirm to some extent the findings of John et al. (2008), who indicate that in economies with poor investor protection, controlling shareholders will divert the firm's resources towards conservative projects. However, a corporate governance policy that protects minority shareholders can reduce the discretion of controlling shareholders. As a consequence, the probability of undertaking risky projects that benefit minority shareholders increases. In other words, companies with better governance policies aimed to protect all the investors have higher corporate risk (Ferreira & Laux, 2007).

The results confirm that controlling families are aware that engaging in risky activities is a significant channel of enhancing company's competitive position and ensuring its long-term survival, which in turn can lead to increase the SEW and financial benefits. However, to effectively pursue value-increasing risky projects, they require industry-specific knowledge, experience, and external sources of financing. These valuable resources are often scarce in family firms, but can be provided by independent directors and local pension to better manage risks.

As proved by the Hansen test, in all the estimates of Tables 5 and 6 the overidentification restrictions are valid, and the instruments are exogenously determined. The results of the AR2 test indicate the absence of a second-order correlation with the error term of the estimates, so that the model estimates are consistent.

4.5 Concluding comments

In this paper we analyse the relationship between corporate risk-taking and the control of the families using a unique sample of 72 Chilean firms between 2005 and 2020. We confirm prior evidence about the negative relationship between the

family presence (both in the ownership and in the board of directors) and the corporate risk level. On the one hand, and consistent with agency theory, these results suggest that controlling families diversify their wealth inefficiently, which leads them to behave conservatively and avoid risky decisions that could jeopardise their control and power over the firm. On the other hand, family-controlled firms are reluctant to undertake projects with high level of variability risk to avoid SEW losses. Controlling families tend to avoid risky ventures due to their association with external funds and external human resources, which would potentially lead to a loss of control over the company. Therefore, we suggest that agency and SEW argument are not in conflict.

We also study the moderating effect of the mechanisms of corporate governance on the corporate risk-taking. We find that independent directors counteract the family's resistance to take risks. Thus, it seems that independent directors bring the experience and expertise needed to support risky projects that benefit minority shareholders. Such skills are generally in short supply in family-owned companies, as management positions are likely to go to family members. Our last set of results is related to the intervention of Chilean pension funds. The participation of these institutional investors in the ownership of family firms also leads to more corporate risk. Thus, pension funds promote the efficiency of corporate governance mechanisms within family firms, generating greater oversight of risky projects.

On the whole, our results suggest that the right balance between inside and independent directors can lead to risky decisions in family firms. Whereas inside directors have specific knowledge of the firm and better comprehension of family interests, independent directors have the incentives to pursue risk ventures by counteracting the risk reluctance of the family members. Similarly, the involvement of institutional investors in the ownership of family-controlled firms seems to improve the corporate governance and lead to better risk management. In this sense, we confirm the idea that family involvement in ownership should be complemented

with other internal corporate governance mechanisms to avoid wealth extraction from non-family investors (Bammens et al., 2011). Therefore, our results align with the existing literature by demonstrating that independent directors and institutional investors serve as efficient mechanisms for supervising the management of controlling shareholders and promoting corporate governance practices (Briano-Turrent & Rodríguez-Ariza, 2016; De-la-Hoz & Pombo, 2016).

Our work offers helpful clues to regulators and policy makers. Chile has made remarkable progress in the corporate governance, but the institutional environment is still far from the standards of other developed countries, especially in terms of the legal protection of minority shareholders. The Chilean economy characterised by family business groups and a high concentration of ownership needs a better design of the governance mechanisms to avoid sub-optimal risk policies. Although listed family firms include the participation of independent directors as a response to pressure from other shareholders, there is still a resistance to incorporate this type of directors in many Latin American economies. Moreover, Chile does not have a legislation or regulations requiring the board of directors to supervise the company's risk management. Thus, Chilean laws could be improved to incorporate independent directors as active agents that have a say on corporate risk-taking. In the same vein, regulators should promote the participation of AFPs in the firms in which their influence can be more decisive. Therefore, AFPs arise as a complementary mechanism of corporate governance in the case of family firms. This would also lead to an improvement in the profitability of the AFPs' investments, which is especially important given that they manage the mandatory savings of a large part of the country's workers. Additionally, our results can be extended to other emerging economies, especially the rest of the Latin American economies, where pension funds are the dominant institutional investors. According to the Chilean Pension Fund Statute, the AFPs are obliged to get involved actively in the shareholders meetings by voting in all important issues,

including risk-taking decision-making. This policy can be implemented in other emerging economies where pension funds are a relevant shareholder.

Our research can also have implications for investors and family owners. The current Chilean legislation provides the controlling families with ability to create a board of directors composed mainly of inside directors. Our results highlight the complementary role of independent directors and pension funds in family-controlled firms. Thus, this type of directors and investors should be not only a response to market pressure but also should be welcomed in family firms in order to optimise the risk strategies.

Our work is not free of limitations. Firstly, although there is a significant presence of family firms among listed corporations, most family firms are privately held firms (Arosa et al., 2010). Since the governance mechanisms of listed family firms do not necessarily work in private family firms, future research could study the joint effect of the board of directors and ownership structure on the corporate risk of non-listed firms. Secondly, another direction for future research is deepening into the governance structure of the family firms and checking the mediating role of the board strategy committee. Thirdly, whereas we have studied the risk level of the firms, it is still uncertain if more risk-taking implies a better risk-return relationship. The financial theory supports the notion that corporate risk in itself is not good or bad, but must be assessed coupled with firm performance. Thus, new research could analyse the impact of this additional risk on the firm performance. Lastly, given the reluctance of the independent directors and pension funds to take risks in non-family-controlled firms, our research suggests that family firms are a specific framework that counteracts their trend to suboptimal risk choice. Another direction for future research is deepening into the environment that family firms provide to independent directors and pension funds to take venture risks.

CAPÍTULO 5: CONCLUSIONES

CAPÍTULO 5

Conclusiones

5.1 Principales resultados

El gobierno corporativo como herramienta de supervisión de la estrategia de riesgo ha cobrado relevancia en los últimos años, impulsado por los escándalos financieros de compañías como Enron, Lehman Brothers o WorldCom (Jumreornvong et al., 2018; Kalia & Gill, 2023; Younas et al., 2019). A partir de la crisis financiera de 2008, diversos entes reguladores han incrementado las recomendaciones u obligaciones tendentes a mejorar el control interno de la gestión de riesgo (OECD, 2023). En este contexto, numerosos estudios han aportado evidencia de la importancia de la estructura de gobernanza de las empresas en la búsqueda de una gestión de riesgo eficaz.

En el caso particular de las economías latinoamericanas, la débil protección legal de los inversores y el alto grado de concentración de propiedad propician la aparición de conflictos de agencia entre el accionista dominante y los accionistas minoritarios. Estos conflictos tienen su manifestación en la política de riesgo corporativo. Los accionistas dominantes tienden a una diversificación ineficiente que se traduce en un alto nivel de exposición al riesgo de la empresa, y utilizan la gestión de riesgo como una forma de proteger su posición. Por este motivo, la estructura de gobierno de las empresas tiende a reducir la discrecionalidad de los accionistas dominantes en la estrategia de riesgo corporativo.

Inspirados por estas ideas, la presente tesis doctoral tiene por objetivo analizar el impacto del gobierno corporativo en la gestión de riesgo de las empresas cotizadas de Latinoamérica. Ese objetivo general se desglosa en tres objetivos específicos que se centran en las características del director general, la estructura de propiedad y el

consejo de administración como elementos modeladores de la asunción de riesgo. Para ello se llevó a cabo tres estudios empíricos que incluyeron empresas cotizadas de las principales economías de la región (Argentina, Brasil, Chile, Colombia, México y Perú), durante el período comprendido entre 2005 y 2020. Para cuantificar el nivel de riesgo corporativo, se utilizaron dos medidas de variabilidad de los rendimientos de las acciones. El riesgo total, calculado como la desviación estándar anualizada de los rendimientos diarios de las acciones, y el riesgo idiosincrático, calculado como la desviación estándar anualizada de los residuos del modelo de mercado.

Nuestra investigación se apoya en tres fundamentos teóricos principalmente: la teoría de los escalones superiores, la teoría de la agencia y la teoría de la riqueza socioemocional. La primera de ellas, la teoría de los escalones superiores, desarrollada por Hambrick and Mason (1984) y basada en la psicología conductual, sugiere que los valores y preferencias de los directivos afectan a su proceso de toma de decisiones y, por ende, a las políticas corporativas. Dichos atributos psicológicos de los directivos suelen medirse a través de características sociodemográficas como la edad, el género, la educación, la nacionalidad, la religión, entre otros.

Nuestro segundo fundamento, la teoría de la agencia, postula que la separación entre la propiedad y la gestión de la empresa, así como la discrepancia de intereses entre el director general (agente) y los accionistas (principales) pueden desembocar en un comportamiento oportunista por parte del primero que podría perjudicar la riqueza de los segundos. Sin embargo, en empresas de propiedad concentrada dicho conflicto es menos pronunciado que el existente entre accionistas controladores y accionistas minoritarios pues el elevado poder de voto de los primeros les permite anteponer sus intereses a los de los últimos. De esta manera, la gestión de riesgo suele convertirse en un mecanismo de extracción de riqueza, en el cual los accionistas dominantes promueven estrategias conservadoras que pueden afectar negativamente al resto del accionariado.

En tercer lugar, esta tesis utiliza la teoría de la riqueza socioemocional desarrollada por Gómez-Mejía et al. (2007), según la cual la gestión de las empresas familiares no solo obedece a motivos financieros sino que también esta influenciada por aspectos emocionales de las familias controladoras. De acuerdo con esta teoría, las familias controladoras buscan preservar aspectos no financieros como la identidad familiar, el control de la empresa, la reputación familiar o el traspaso generacional, entre otros. Estas motivaciones pueden llevar a que estas empresas asuman riesgos que comprometan su rendimiento financiero si con ello se protege su riqueza socioemocional, lo cual cuestiona la idea tradicional de que las empresas familiares son inherentemente adversas al riesgo.

En el capítulo 2 de la presente tesis se aborda la relación entre las características del director general y la asunción de riesgo corporativo. Observamos que tanto la edad como la permanencia en el cargo del director general son elementos relevantes para explicar la política de riesgo. La edad del director general presenta una relación no lineal en forma de U invertida con la asunción de riesgo, lo que significa que en los directores jóvenes el envejecimiento lleva a que estén cada vez más dispuestos a asumir riesgos en busca de oportunidades de crecimiento. Mientras que los directores generales de mayor edad tienden a ser más conservadores a medida que envejecen, probablemente por su preocupación por la estabilidad laboral. En cuanto a la permanencia en el cargo del director general, se observa una relación en forma de U con la asunción de riesgo. Esto indica que los directores generales con un período de permanencia corto evitan cada vez más el riesgo. Sin embargo, a medida que adquieren más experiencia y ganan la confianza del resto de los partícipes en la empresa, se vuelven cada vez más propensos a asumir riesgos. Por tanto, es importante reconocer que estas dos características, a menudo utilizadas de manera intercambiable en la literatura, en realidad evalúan aspectos distintos.

En este capítulo también identificamos otras características demográficas y adquiridas que ejercen influencia sobre la asunción de riesgo. Encontramos que las directoras generales tienden a ser más conservadoras, lo que se traduce en niveles

de riesgo corporativo más bajos en las empresas que dirigen. Por otro lado, la concentración de poder en manos de un solo ejecutivo, que ocupa tanto el cargo de director general como el de presidente del consejo de administración, se asocia con una toma de decisiones corporativas más arriesgadas debido a su capacidad de adaptación rápida y respuesta ágil ante proyectos arriesgados, pero potencialmente generadores de valor. Además, los directores generales con un título de máster en administración de empresas están mejor preparados para asumir riesgos, lo que sugiere una relación positiva entre la educación del director general y la asunción de riesgo corporativo. En relación con la nacionalidad del director general, los resultados indican que los extranjeros muestran una mayor disposición a asumir riesgos en comparación con los directivos locales. En este contexto, la cultura del país de origen del director general también influye en la gestión de riesgo, pues los directores generales de países con un alto índice de aversión a la incertidumbre muestran una menor propensión al riesgo. Por último, en cuanto al horizonte profesional del director general, constatamos que los directores generales con horizontes de carrera más cortos tienden a evitar proyectos arriesgados, ya que temen comprometer su reputación antes de retirarse.

Los resultados del capítulo tres, centrado en el impacto de la estructura de propiedad en la asunción de riesgo corporativo, subrayan que diferentes tipos de accionistas controladores muestran preferencias de riesgo distintas, lo que se traduce en diferentes niveles de riesgo corporativo. Las empresas controladas por familias exhiben niveles más bajos de riesgo corporativo debido a su naturaleza no diversificada y su búsqueda de beneficios no financieros. Resultados similares se han obtenido para las empresas controladas por el gobierno, ya que su compromiso se centra más en objetivos políticos y sociales que en objetivos financieros. Por otro lado, los inversores extranjeros, como accionistas controladores, fomentan decisiones arriesgadas debido a su capacidad para obtener financiación en el extranjero y experiencia en la gestión de proyectos arriesgados. En consecuencia, la identidad de los accionistas controladores desempeña un papel fundamental en la asunción de riesgo de una empresa.

Además, la presencia de grandes accionistas no controladores desempeña un papel importante en la supervisión de la estrategia de riesgo y promueve decisiones arriesgadas que maximizan el valor de la empresa. Estos grandes accionistas no controladores poseen suficiente poder de voto y tienen incentivos para limitar decisiones excesivamente conservadoras por parte de la familia controladora, lo que se halla en consonancia con los intereses de los accionistas minoritarios.

Sin embargo, es importante destacar que la influencia de los grandes accionistas no controladores está condicionada por su identidad, pues estos accionistas pueden tanto colaborar con el accionista controlador como desafiarlo. En el contexto de las empresas familiares, cuando el segundo accionista más grande también es de naturaleza familiar, se forma una coalición de intereses que busca obtener beneficios privados a expensas de los accionistas minoritarios mediante una estrategia de riesgo conservadora. Por el contrario, cuando el segundo accionista más grande es un inversor institucional, este cuenta con la experiencia y los conocimientos necesarios para contrarrestar la desviación de recursos hacia proyectos conservadores. En resumen, los resultados de este estudio demuestran que existen diferencias en las preferencias de riesgo de los accionistas controladores y revelan una dinámica dual en la interacción entre los accionistas controladores y no controladores.

El capítulo 4 se centra en el impacto de la estructura de propiedad y la composición del consejo de administración en la asunción de riesgo de las empresas familiares. Proporcionamos evidencia que respalda la idea de que las familias controladoras son inherentemente conservadoras y utilizan la gestión de riesgo como un medio para desviar recursos de la empresa hacia proyectos conservadores y extraer riqueza de los accionistas minoritarios, al tiempo que protegen sus beneficios socioemocionales. Además, la implicación de la familia en la propiedad y en el consejo de administración se asocia con niveles más bajos de riesgo corporativo.

Por otro lado, nos planteamos si ciertos mecanismos internos de gobierno corporativo pueden reducir la aversión al riesgo de la familia controladora. Encontramos que los consejeros independientes cumplen un papel de supervisión crucial en la toma de decisiones de riesgo en las empresas familiares. Esto se debe a que estos consejeros aportan experiencia y conocimientos objetivos que no están disponibles internamente y que son esenciales para gestionar decisiones arriesgadas. Resultados similares se han obtenido con respecto a la presencia de los fondos de pensiones locales en la estructura de propiedad. Estos inversores, a diferencia de las familias controladoras, están más enfocados a la búsqueda de riqueza financiera y no tienen vínculos emocionales con la empresa, lo que los lleva a incentivar decisiones arriesgadas.

5.2 Contribuciones e implicaciones

Con esta tesis doctoral tratamos asimismo de realizar algunas contribuciones a la literatura en diversos aspectos. En primer lugar, esta tesis aspira a tener implicaciones teóricas en el campo del gobierno corporativo. Nuestros resultados proporcionan evidencia de que ciertos mecanismos internos de gobierno corporativo desempeñan un papel fundamental en la supervisión de la estrategia de riesgo empresarial, al atenuar posibles comportamientos oportunistas entre los diversos partícipes de la empresa. Estos resultados respaldan la literatura sobre la importancia de los mecanismos de gobierno corporativo de cara a la protección de los intereses de los accionistas minoritarios en las economías emergentes. Esto es particularmente relevante en contextos donde la protección legal de los accionistas minoritarios es limitada, lo que propicia la aparición de accionistas controladores con un excesivo poder de voto y una amplia discrecionalidad en la toma de decisiones.

El estudio de los mecanismos internos de gobierno corporativo es especialmente importante en las empresas familiares, lo que podría ser considerado nuestra segunda contribución. Confirmamos la hipótesis de que las familias controladoras

tienden a guiar a las empresas hacia proyectos con bajos niveles de riesgo, presumiblemente con el objetivo de proteger sus beneficios socioemocionales a expensas de la riqueza de otros accionistas. En este contexto, nuestros resultados permiten entender como la presencia de otros accionistas y de consejeros independientes constituye una aportación de recursos, conocimientos y motivaciones necesarios para compensar la toma de decisiones conservadoras en empresas controladas por familias.

En tercer lugar, también contribuimos a examinar la relación entre los mecanismos de gobierno corporativo y la asunción de riesgo en el contexto de las economías latinoamericanas. Aunque algunos estudios han abordado estos temas previamente (por ejemplo, Bonilla et al., 2010; Llanos-Contreras et al., 2021; Poletti-Hughes & Briano-Turrent, 2019; Poletti-Hughes & Williams, 2019), ninguno ha investigado de manera específica las características del director general, el grado de contestación de los grandes accionistas no controladores o la composición del consejo de administración como factores predictivos de la asunción de riesgo corporativo en esta región. A pesar de que nuestra tesis se centra en el contexto latinoamericano, los resultados obtenidos pueden ser extrapolados a otras economías emergentes que también carecen de una sólida protección legal para los inversores.

Además de estas contribuciones sustantivas, nuestra tesis también ofrece aportaciones metodológicas que pueden ser de utilidad en futuras investigaciones. Los tres estudios utilizan medidas de variabilidad de los rendimientos de las acciones. Estas medidas reflejan la percepción del mercado sobre la gestión de riesgo de la empresa y son menos susceptibles de manipulación en comparación con las variables de riesgo basadas en información contable. El primer estudio emplea una amplia gama de características del director general que tienen una fuerte capacidad explicativa en la asunción de riesgo. Estas características pueden ser utilizadas como indicadores de la aversión al riesgo del director general y explorar su impacto potencial en otros resultados organizacionales o decisiones financieras.

El segundo estudio presenta una detallada clasificación de los grandes accionistas, lo que proporciona evidencia sobre qué accionistas tienen la capacidad de formar una coalición de control para desviar recursos de la empresa y obtener beneficios personales, y cuáles tienen incentivos y recursos para desafiar el poder del accionista controlador. En cuanto al tercer estudio, ofrece un exhaustivo desarrollo operativo del concepto de “propiedad familiar” en un contexto de economías emergentes, abordando una cuestión relevante debido a la falta de consenso en cómo medir el carácter familiar de una empresa.

Dado que existe una relación directa entre la disposición de las empresas a asumir riesgos y el crecimiento económico del país, nuestros resultados también tienen implicaciones significativas para los reguladores y legisladores. A pesar de los avances en los códigos de gobierno corporativo en los mercados latinoamericanos, aún existen diferencias sustanciales con respecto a los estándares de los países desarrollados. Como mencionamos previamente, el contexto latinoamericano se caracteriza por la presencia de problemas de agencia entre los accionistas dominantes y los accionistas minoritarios. Basándonos en nuestros resultados, los organismos reguladores pueden fomentar la implementación de ciertos mecanismos internos de gobierno corporativo que se asocian con mayores niveles de riesgo. Ejemplos de estos mecanismos son una mayor presencia de consejeros independientes, un mayor involucramiento de fondos de pensiones locales en la estructura de propiedad y una mayor participación de los grandes accionistas no controladores en la toma de decisiones, entre otros. Por otra parte, los resultados de la tesis pueden servir para que los organismos reguladores de los mercados de capitales fomenten la divulgación de información detallada sobre el director general, consejos de administración y estructura de propiedad.

Finalmente, y teniendo en cuenta que la asunción de riesgo es un factor clave para alcanzar la sostenibilidad del negocio a largo plazo, nuestros resultados también pueden ser valiosos para el mundo empresarial. De esta manera ofrecemos evidencia sobre las características del director general, la composición del consejo

de administración y la estructura de propiedad que pueden utilizarse para mejorar la gobernanza corporativa y fomentar decisiones arriesgadas que aumenten el valor de la empresa. En este sentido, recomendamos la incorporación de estos mecanismos como una forma de mejorar la gestión de riesgo y otras estrategias, en lugar de simplemente responder a las exigencias del mercado.

5.3 Limitaciones y futuras investigaciones

Aunque en las secciones 2.5.2, 3.5 y 4.5 se han expuesto las limitaciones de cada estudio empírico de la tesis doctoral, procede ahora identificar y describir las limitaciones generales que puedan abrir, igualmente, futuras líneas de investigación. De alguna manera, estas limitaciones pueden considerarse como un punto de partida en la investigación del riesgo corporativo de las empresas de América Latina en un contexto de gobierno corporativo.

Una de las principales limitaciones de la tesis se refiere a la cobertura de la muestra. Dado que la investigación utiliza medidas de riesgo basadas en información de mercado, se excluyeron de la muestra aquellas empresas cuyas acciones presentan bajos niveles de contratación, reduciendo así el tamaño de la muestra inicial. Por lo tanto, los resultados y conclusiones obtenidos pueden no ser completamente generalizables a aquellas empresas cotizadas con una presencial bursátil limitada. Más aún, habría que plantearse igualmente hasta qué punto nuestros resultados son aplicables a empresas que no cotizan en mercados organizados. Además, la obtención de información para estimar las principales variables de interés también complicó la elaboración de la muestra. La legislación de los principales mercados de capitales en América Latina no exige una divulgación detallada de las características del director general, consejeros o inversores. Esto obligó a recurrir a otras fuentes de información no oficiales que podrían sesgar nuestros resultados. Puesto que la divulgación de este tipo de información es una práctica voluntaria, cada estudio empírico de la tesis está compuesto por muestras distintas. Por ejemplo, Chile es el único país que ofrece información detallada sobre la

participación de fondos de pensiones locales en la estructura de propiedad. Se explica así que el tercer estudio solo esté compuesto por empresas que cotizan en la Bolsa de Comercio de Santiago de Chile (BCS).

En otro orden de consideraciones, en la presente tesis realizamos una detallada compilación de características demográficas, culturales y adquiridas para medir aspectos psicológicos tradicionalmente no observables de los directores generales de las empresas. No obstante, recientemente diversos estudios han introducidos aspectos psicológicos, ausentes en la presente tesis, como factores explicativos del riesgo corporativo. Por ejemplo, Boustanifar et al. (2022) han constatado que los directores generales con mayor propensión al riesgo estimulan las decisiones de internacionalización, eligiendo los mercados con mayor distancia cultural y con modos de entradas más arriesgados. De manera similar, Kraiczy et al. (2015) han observado que la propensión al riesgo de los directores generales se vincula a mayores niveles de innovación en el lanzamiento de nuevos productos. Por su parte, Chatterjee and Hambrick (2011) han destacado que los directores más narcisistas se sienten más motivados por la aprobación social de los resultados positivos de la empresa que lideran, lo que conduce a una mayor propensión al riesgo. Sin embargo, Aabo et al. (2021) matizan estos resultados señalando que la relación positiva entre el narcisismo del director general y la asunción de riesgo está condicionada por factores externos de modo que los directores generales narcisistas asumen mayores riesgos cuando aún no han alcanzado el nivel esperado de confirmación externa y admiración de los demás.

Por otra parte, Adam et al. (2015) y Liu et al. (2022) han abordado la relación entre el exceso de confianza de los directivos y la asunción de riesgo corporativo, destacando que este rasgo de personalidad deteriora la eficiencia de la gestión de riesgo. En este contexto, Goldberg et al. (2020) y Li and Tang (2010) muestran que el exceso de confianza o arrogancia de los directivos generales está asociado con una sobrestimación (subestimación) de su capacidad para generar buenos (malos) resultados, lo cual se traduce en una mayor disposición a asumir decisiones

financieras arriesgadas. De hecho, Arena et al. (2018) afirman que los directores generales arrogantes sobrestiman su capacidad para gestionar decisiones innovadoras pero complejas, como por ejemplo, la innovación medioambiental. Asimismo, Pelster et al. (2023) han informado evidencia de que rasgos psicológicos como el maquiavelismo, narcisismo y psicopatía, están asociados positivamente a mayores niveles de cobertura selectiva. Según estos autores, dado el carácter inherentemente arriesgado de este tipo de actividades, los directivos utilizan estas decisiones como una manera de satisfacer sus necesidades de atención y autoestima.

Otro aspecto que podría ser considerado en futuras investigaciones es el impacto del comité de riesgo en la gestión de riesgo. La crisis financiera de 2008 reveló grandes deficiencias en la gestión de riesgo de los consejos de administración y llevó a los diferentes reguladores, agencias gubernamentales y organizaciones de supervisión financiera de muchos países a reevaluar sus prácticas de supervisión de la gestión de riesgo para implantar políticas más efectivas y rigurosas. Uno de los principales mecanismos propuestos fue la creación de un comité de riesgos independiente. Bhuiyan et al. (2021) documentan que los integrantes del comité de riesgos poseen las capacidades necesarias para evaluar los potenciales riesgos, lo cual se traduce en una menor probabilidad de llevar a cabo decisiones financieras excesivamente arriesgadas. Sin embargo, Akbar et al. (2017) indican que el comité de riesgos está asociado a un mayor nivel de riesgo corporativo pues está integrado por consejeros experimentados y capaces de identificar proyectos arriesgados pero generadores de valor. Por el contrario, Minton et al. (2014) no encuentran que la presencia de comités de riesgo esté asociada significativamente con la asunción de riesgo. Resultados similares encuentran Hines and Peters (2015), quienes alertan del peligro de la creación de comités de riesgo en la entidades financieras, las cuales se limitan a desarrollar prácticas simbólicas tratando de crear una percepción al mercado de una adecuada gestión de riesgo. Por lo tanto, la recomendación de que la gestión de riesgo esté a cargo exclusivamente de un comité de riesgos independiente en lugar de corresponder al comité de auditoría o al consejo de administración aún no tiene el suficiente apoyo empírico. Es importante considerar

que, en el caso latinoamericano, los reguladores no exigen la existencia de un comité de riesgos independiente del consejo de administración. De manera excepcional, Colombia solamente obliga a la creación de un comité de riesgos independiente para las instituciones financieras mientras que países como Argentina y Perú se limitan a recomendar el establecimiento de este tipo de comités. Por tanto, la implementación de este comité podría mejorar la confianza de los participantes del mercado en la gestión de riesgo de la empresa y aliviar las preocupaciones sobre conductas excesivamente conservadoras o arriesgadas.

Otra área de posible exploración en investigaciones futuras sería la incorporación de características del país en que opera la empresa. Tran (2019) y Vural-Yavaş (2020) han observado que un aumento en los índices de incertidumbre política económica se asocia con una disminución en el riesgo corporativo. La explicación parece hallarse en que un mayor grado de incertidumbre política económica conduce a condiciones de mercado desfavorables, ya que deteriora las condiciones de financiación y aumenta la aversión al riesgo de los directivos. Un aspecto adicional a nivel macroeconómico que merece consideración es la calidad de las instituciones políticas de un país. Empleando muestras de 90 y 45 países respectivamente, Bao and Cardoza (2023) y Boubakri, Mansi, et al. (2013) demuestran que instituciones políticas con controles eficaces mejoran el entorno empresarial y las oportunidades de inversión, lo cual a su vez se traduce en mayores niveles de riesgo corporativo. Asimismo, la corrupción del país también es otro factor ambiental que incide en la gestión de riesgo de las empresas. Según el análisis de 20 países emergentes realizado por Tran (2022), en aquellas naciones con mayores niveles de corrupción, las empresas tienden a asumir menores riesgos pues la frecuencia de sobornos a funcionarios públicos y el mayor coste de la financiación desincentivan la ejecución de proyectos arriesgados.

Dado que América Latina debe hacer frente a serios desafíos en términos de estabilidad política y calidad institucional, sería deseable la realización de investigaciones futuras que aborden el impacto de factores propios de cada país en

la gestión de riesgo en esta región. Específicamente, la relación entre una mayor incertidumbre política y la asunción de riesgo corporativo reviste importancia en este contexto, caracterizados por ciclos políticos volátiles. Los resultados de los procesos electorales de los últimos años en la región ponen de manifiesto dicha volatilidad y subrayan la conveniencia de este tipo de estudios. En la misma línea, la necesidad de mejorar la lucha contra la corrupción y la protección legal de inversores puede estimular la investigación acerca de cómo estos afectan a la gestión del riesgo corporativo.

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