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Академические
обзоры

Методология исследований
корпоративных финансов

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Влияние применения внутренних механизмов корпоративного управления на стоимость компаний со стратегиями диверсификации и фокусирования

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Аннотация

Проблематика корпоративного управления в России представляется актуальной на сегодня. Это обусловлено тем, что российские условия ведения бизнеса требуют особого подхода к формированию оптимальной системы корпоративного управления.

Цель исследования заключается в оценке влияния отдельных компонентов корпоративного управления на стоимость компаний с двумя стратегиями развития: диверсификации и фокусирования. Основная гипотеза исследования состоит в том, что в зависимости от выбранной стратегии развития (диверсификации или фокусирования) разные механизмы корпоративного управления оказывают различное влияние на стоимость данных компаний. Для обоснования выдвинутой гипотезы в работе построена регрессионная модель влияния основных факторов корпоративного управления на показатель экономической добавленной стоимости (EVA).

В результате проведенного исследования для компаний, использующих стратегии диверсификации и фокусирования, было выявлено влияние таких факторов корпоративного управления, как доля независимых директоров в составе совета, доля акций, принадлежащих менеджменту компании, и участие государства в акционерном капитале компании. По результатам построенной регрессионной модели для представленной выборки можно сделать следующие выводы: в зависимости от выбранной стратегии развития прослеживается различная структура корпоративного управления, в частности, для диверсифицированных компаний характерны более независимый совет директоров, а также большее участие государства в акционерном капитале компании. В условиях многообразия стратегий диверсификации в работе акцент сделан только на две стратегии. В перспективных исследованиях предполагается рассмотрения влияния прочих факторов корпоративного управления (например, корпоративного долга, формы выплаты дивидендов) на компании со стратегиями связанной и несвязанной диверсификации.

По сравнению с существующими исследованиями в представленной работе проведено комплексное исследование влияния таких факторов корпоративного управления, как доля независимых директоров в составе совета, доля акций, принадлежащих менеджменту компании, и участие государства в акционерном капитале компании на результаты российских компаний, реализующих стратегии диверсификации и фокусирования, сделаны практико-ориентированные выводы. Результаты исследования могут быть полезны менеджерам и руководителям корпоративных структур с целью оценки эффективности и результативности существующей в компании системы управления.

Ключевые слова: диверсифицированная компания, корпоративное управление, развивающиеся рынки, экономическая добавленная стоимость

JEL: G34, G39

Введение

Все больше компаний принимают решение о диверсификации бизнеса с целью получения устойчивой позиции на рынке и минимизации рисков. Однако диверсифицированные компании весьма сложны в планировании и бюджетировании различных бизнес-сегментов, что влечет за собой агентский конфликт и порождает наличие проблем в сфере корпоративного управления.

Статья посвящена изучению различий корпоративного управления в российских компаниях, использующих стратегии диверсификации и фокусирования. Рассмотрение корпоративной диверсификации в развивающихся странах стало популярным в последние десятилетия, в то же время роль корпоративного управления в деятельности диверсифицированных компаний остается предметом дальнейших исследований. Цель исследования заключается в оценке влияния отдельных механизмов корпоративного управления (независимых директоров в составе совета директоров, структуры собственности) на стоимость компаний с разными стратегиями корпоративной дифференциации.

Данная работа имеет практическую значимость для компаний, использующих в качестве стратегии развития диверсификацию или фокусирование. Выводы и рекомендации, предложенные в работе, могут быть применены в построении систем управления корпоративными структурами с целью повышения их результативности и инвестиционной привлекательности. Комплексный анализ, проведенный в работе на выборке российских диверсифицированных компаний, позволяет сформировать выводы о взаимосвязи таких характеристик, как наличие доли государства и независимых директоров в структуре компании, выбранная стратегия, финансовые результаты деятельности и перспективы устойчивого развития.

В начале статьи проводится обзор исследований по оценке эффективности корпоративного управления на развитых и развивающихся рынках капитала, выдвигаются гипотезы о влиянии корпоративного управления на стоимость компании. Далее на основе выборки российских компаний с разными стратегиями развития выявляются ключевые факторы успешности и эффективности корпоративного управления для российского рынка.

Диверсификация на развитых и развивающихся рынках капитала: обзор исследований

Изучение феномена диверсификации и его влияния на стоимость компаний в развитых странах началось в 1980-х гг. Lang and Stulz (1994) выявили положительную корреляцию между Q-Тобином и стратегией фокусирования. Berger and Ofek (1995) в качестве

результатов исследования получили, что каждый бизнес-сегмент диверсифицированной компании имеет на 13–15% большую стоимость, нежели диверсифицированная компания в целом. Comment and Jarrell (1995) продемонстрировали, что снижение степени диверсификации компании увеличивает ее стоимость, а John and Ofek (1995) по результатам исследования сделали вывод, что продажа активов приводит к улучшению операционной деятельности диверсифицированной компании, когда речь идет о фокусировании на определенном бизнес-сегменте. В целом, проведенные исследования свидетельствуют об отрицательном влиянии корпоративной диверсификации на стоимость компании.

Исследования взаимосвязи корпоративной диверсификации и финансовой эффективности на развивающихся рынках стали активно проводиться в начале 2000-х гг. Lins and Servaes (2002) в результате проведения исследования на выборке из компаний Гонконга, Малайзии, Индии, Индонезии и Тайланда за 1995 г. получили, что диверсифицированные компании являются менее прибыльными, нежели однонаправленные. Ahmad et al. (2003), проведя исследование на компаниях Малайзии, не выявили значимой зависимости между количеством акций во владении менеджментом и корпоративной диверсификацией. Claessens et al. (2003) констатировали, что вертикально-интегрированные компании имеют плохие операционные показатели как в краткосрочной, так и в долгосрочной перспективе.

Результаты другой группы исследований, проведенных на развивающихся рынках капитала, свидетельствуют об обратном. К примеру, Ishak and Napier (2006), анализируя взаимосвязь структуры собственности в компании и корпоративной диверсификации на выборке из 355 компаний Малайзии, выявили положительное влияние диверсификации на стоимость компании. Chakrabarti et al. (2007) провели исследование на выборке из шести азиатских стран за период 1988–2003 гг. и сделали вывод, что диверсификация оказывает отрицательное воздействие в более развитой институциональной среде, то время как в менее развитой среде имеет положительное влияние на стоимость компаний. Lien, Li (2013) в своем исследовании также делают вывод, что стратегия диверсификации и соблюдение некоторых правил корпоративного управления на развивающихся рынках могут служить успешными шагами в ответ на институциональные несовершенства развивающихся рынков, тем самым увеличивая эффективность компаний путем максимального использования имеющихся у нее ресурсов.

Агентский конфликт между менеджерами и собственниками, в свою очередь, часто является причиной потери ценности от диверсификации [Anderson et al., 2000]. К примеру, Lang, Stulz (1995) утверждают, что менеджеры склонны к принятию решения о диверсификации бизнеса для увеличения размера и

престижа компании, которой они управляют. Кроме того, Amihud and Lev (1981) считают, что работа для менеджеров в диверсифицированной компании расширяет их интеллектуальный капитал, что делает их более привлекательными на рынке труда.

Ряд исследователей акцентируют внимание на взаимосвязи между структурой корпоративного управления и корпоративной диверсификацией. Denis, Sarin (1997) выявили сильное влияние инсайдеров на корпоративное управление и отметили, что снижение агентских издержек в компаниях с концентрированной структурой собственности связано с низким уровнем их диверсификации. Anderson et al. (2000), сравнивая структуру корпоративного управления в компаниях со стратегией диверсификации и фокусирования, отмечают, что CEO в диверсифицированных компаниях характеризуются более низким уровнем долей акций во владении, а также вознаграждением за выполненную работу. Кроме того, было выявлено, что диверсифицированные компании склонны иметь больше независимых директоров и более подвержены частым сменам менеджмента.

В то же время, что касается проведения исследований в русле структуры корпоративного управления в диверсифицированных компаниях развивающихся рынков, данный вопрос недостаточно освещен в литературе. В качестве примера проведения подобного исследования можно отметить работу Chen and Chen (2012), где авторы изучали, как структура корпоративного управления диверсифицированных компаний влияет на эффективность инвестиционной стратегии. Было выявлено, что эффективность инвестиционной стратегии повышается при более независимом составе совета директоров, высокой доле институциональных инвесторов, увеличении доли владения акциями компании независимыми директорами, высоком качестве внутреннего аудита.

Рассмотрим подробнее понятия связанной и несвязанной диверсификации.

Компания использует стратегию связанной диверсификации, если она расширяет свою деятельность, продолжая работать с той же группой потребителей и в том же рыночном сегменте, применяет те же производственные ресурсы, а также осуществляет аналогичный производственный процесс, с теми же технологиями и организационной структурой [Markides, Williamson, 1994, p. 149; Rumelt, 1982, pp. 359–360]. Преимущества связанной диверсификации будут наиболее наглядны при условии, что активы бизнес-сегментов выступают в качестве субститутов или complements по отношению друг к другу. Несмотря на то, что характеристики ресурсов могут различаться, взаимосвязь ресурсов приводит к экономии от масштаба. Кроме того, компания может повысить уровень обслуживания старых клиентов, а также привлечь новых за счет нового направления, которое непосредственно связано со старой сферой деятельности (Kim, Finkelstein, 2009). Потребитель, в свою

очередь, сокращает издержки на поиск продукции и время на ее приобретение, что повышает стоимость предоставляемой продукции.

В стратегическом менеджменте несвязанная диверсификация подразумевает способность компании управлять различными бизнес-единицами и их ресурсами [Sirmon et al., 2011]. Несвязанная диверсификация, в отличие от связанной, подразумевает наличие в компании бизнес-единиц, функционирующих в абсолютно не связанных отраслях и не имеющих ничего общего друг с другом. В частности, предлагаемые продукты и целевая аудитория данных бизнес-сегментов, а также производственные мощности и навыки персонала различаются между собой. Оправданность использования данной стратегии заключается в создании пула ресурсов, который заменяет неэффективный рынок в разных отраслях.

Диверсифицированная компания обладает особенностями как организационно-управленческими, так и финансовыми. К основным организационно-управленческим аспектам диверсифицированной компании можно отнести наличие более чем одного направления деятельности, что означает функционирование компании сразу в нескольких отраслях экономики, и наличие нескольких бизнес-единиц, которые могут быть как связаны между собой, так и не связаны; наличие головной компании, управляющей инвестиционным портфелем, инвестиционными решениями, финансированием всей компании; наличие многоуровневой организационной структуры и иерархии управления; наличие навыков для обеспечения управления несколькими видами бизнеса одновременно; существование больших издержек, связанных с координацией контроля деятельности компании [Шамраева, 2010]. Из организационно-управленческих аспектов наибольший интерес представляет «двухуровневый» агентский конфликт. Поскольку диверсифицированная компания обладает несколькими уровнями управления, где корпоративный центр обладает полными правами на распределение активов компании, появляется дополнительный узел конфликтов типа «агент – агент». Менеджмент корпоративного центра, являясь одновременно агентом, также заинтересован в получении собственной выгоды от управления [Nazarova, Kolkina, 2016]. Таким образом, многоуровневая система управления в диверсифицированных компаниях усложняет процесс управления данного вида экономического субъекта, что видно как из российских, так и из зарубежных источников.

Среди российских исследователей вопросам особенностей корпоративного управления в интегрированных структурах, последствиям участия государства в управлении компаниями посвящены работы Т.Г. Долгопятовой, С.Б. Авдашевой, Р.И. Капелюшниковой и др. Например, в работе “Corporate Governance in

Russian Big Business: Trends of 2000s» [Dolgopyatova, 2017] рассмотрены тренды 2010-х гг. в развитии корпоративного управления в крупных российских компаниях. Стимулы к совершенствованию корпоративного управления были созданы в том числе за счет усиления государственного влияния как собственника. Интересы бизнеса поддерживались за счет привлечения его представителей к выработке правовых норм и рекомендаций, что способствовало адаптации собственников крупного бизнеса к усилению регулирования при наличии стимулов к использованию корпоративного управления в интересах перспективного развития компаний [Dolgopyatova, 2017]. В статье «Влияние регуляторной среды на модель корпоративного управления компаний с государственным участием: проблемы современной России» [Авдашева, 2013] делаются выводы о неоднозначности эффективности корпоративного управления в компаниях с большой долей государственного участия. В качестве основной причины низкой эффективности автор называет несопоставимость внедрения регуляторных требований (например, регламентация закупок и продаж) к компаниям и их влияния на благосостояние конечных бенефициаров по сравнению с усилиями менеджмента. В исследовании «Концентрация собственности в системе корпоративного управления: эволюция представлений» [Капелюшников, 2006] представлена единая система корпоративного управления современной экономики с акцентом на критерии собственности. Автор предлагает разделять компании на компании с широким владением акциями (модель *W*) и с доминированием блокхолдеров (модель *B*), определяет специфическую модель корпоративного управления в российских компаниях.

Актуальным является исследование влияния диверсификации на эффективность корпоративного управления. В частности, интерес представляет проведение анализа влияния отдельных механизмов корпоративного управления на стоимость компаний со стратегией диверсификации, поскольку компании такого типа обладают особенностями внутреннего управления. Для успешного функционирования данных экономических субъектов требуется формирование оптимальной структуры корпоративного управления.

Под структурой корпоративного управления в статье понимается организационная модель, позволяющая, с одной стороны, регулировать взаимоотношения между менеджерами компании и акционерами, с другой - согласовывать цели различных стейкхолдеров для обеспечения эффективного и перспективного функционирования корпорации. Структура корпоративного управления позволяет идентифицировать правила и порядок принятия решений по текущим и перспективным направлениям развития корпорации, предопределяет задачи каждого участника системы.

Расчетно-аналитическая база

Проверяемые гипотезы

Для проведения регрессионного анализа влияния корпоративного управления на стоимость российских компаний требуется ввести гипотезы, подтверждающие или опровергающие направление данного влияния.

Состав и количество членов в совете являются одними из самых важных аспектов корпоративного управления в компании, поскольку именно совет директоров выполняет наиболее значимые функции, среди них: выбор исполнительного директора, определение миссии компании и стратегии ее развития, перспективное управление в компании [Munisi, Randoy, 2013]. В ряде работ была выявлена прямая статически значимая взаимосвязь показателей эффективности компаний и высокого удельного веса независимых директоров в составе совета [Rosenstein, Wyatt, 1990; Barnhart et al., 1994]. Данный результат также подтверждается в работе Muravyev et al. (2014) на выборке из российских компаний, где авторы анализируют размеры и структуру совета директоров и выявляют положительное влияние независимых директоров в корпоративном управлении при использовании бухгалтерских показателей в качестве зависимой переменной. Что касается различных пропорций независимых директоров в совете в зависимости от стратегии развития компании, то Boonne et al. (2007) и Anderson et al. (2000) доказали, что при расширении сферы деятельности компании путем стратегии диверсификации необходимо увеличивать долю независимых директоров для принятия правильных решений.

Первая гипотеза исследования: *доля независимых директоров в составе совета директоров компаний российского рынка положительно влияет на их стоимость.*

В работе Coles et al. (2008) считают, что диверсифицированные компании и компании с большой долей заемного капитала нуждаются в большом совете директоров, члены которого будут играть роль «консультантов» по вопросам управления крупными компаниями. На развивающихся рынках большинство семейных корпораций пользуются стратегией диверсификации, однако при этом они руководствуются принципами альтруизма во имя будущих поколений и стараются управлять компанией самостоятельно, без привлечения в бизнес независимых директоров [Lien, Li, 2013]. Это, в свою очередь, приводит к тому, что корпорация выходит в те отрасли, в которых может не справиться с конкуренцией по причине недостаточной осведомленности о работе в таком направлении.

Вторая гипотеза исследования состоит в следующем: *диверсифицированные компании обладают более независимым советом директоров нежели компании со стратегией фокусирования.*

В исследованиях Holderness et al. (1999), Kesner (1988), Kole (1995) доказано немонокотонное влияние собственности менеджеров компании на ее эффективность, поскольку слишком большая доля акций во владении менеджмента усложняет уровень агентского конфликта. Что касается различного влияния данной характеристики корпоративного управления в компаниях с разной стратегией развития, то, по мнению Lang, Poulsen, Stulz (1995), менеджеры могут действовать в своих интересах и принять решение диверсифицировать компанию с целью получения высокой должности в крупной и престижной компании. Amihud и Lev (1981) считают, что в интересах менеджеров диверсифицировать компанию для того, чтобы расширить их человеческий капитал и иметь опыт в разных отраслях экономики. Принимая во внимание данные аргументы, можно утверждать, что для минимизации потерь акционеров и создания единых целей для собственников и менеджмента целесообразно предоставлять долю акций менеджменту. При таких условиях менеджмент будет также заинтересован в повышении стоимости компании, как и акционеры. Следовательно, они будут принимать обдуманные решения, ориентированные на долгосрочную перспективу. На наш взгляд, в диверсифицированных компаниях данный фактор будет иметь большее влияние на стоимость компании нежели в однонаправленных, что обусловлено более обширной деятельностью диверсифицированных компаний и приведет к более значительным потерям в случае выхода на неперспективные рынки.

Третья гипотеза: *увеличение доли акций, принадлежащих менеджменту, при невысоком уровне собственности менеджмента оказывает в большей степени положительное влияние на стоимость диверсифицированных компаний.*

Что касается участия государства в акционерном капитале компании, то исследования практики российских компаний показали, что в отличие от развитых стран в России наличие акций компании у государства является положительной чертой корпоративного управления. Это обусловлено тем, что участие государства в деятельности компании стимулирует совершенствование в ней практики корпоративного управления, а также положительно сказывается на ее финансово-хозяйственной деятельности [Долгопятава, 2016]. Участие государства в акционерном капитале компании снижает затраты на заемный капитал, поскольку компании с государственным участием обладают большим доверием со стороны кредиторов. Однако, с другой стороны, для диверсифицированных компаний участие государства в акционерном капитале компании может сдер-

живать ее развитие. Интересы государства зачастую не совпадают с интересами остальных акционеров. В случае если государство владеет контрольным пакетом акций, совет директоров фактически не является органом, принимающим решение по таким вопросам, как приобретение активов, определение стратегических направлений инвестирования и др. [Харчилава, 2015].

Четвертая гипотеза состоит в следующем: *доля акций в руках государства значимо влияет на стоимость компаний российского рынка.* В силу того, что на развивающихся рынках, к числу которых относится Россия, наблюдается слабость институциональной среды и законодательной базы, а также сложности в привлечении финансирования и неразвитость внешнего рынка капитала, стратегия диверсификации может служить успешным шагом в ответ на институциональные несовершенства, тем самым увеличивая эффективность компаний путем максимального использования имеющихся ее ресурсов. Диверсифицированные компании могут брать на себя функции различных институтов развитого рынка, тем самым создавая потенциал увеличения стоимости для интегрированных компаний. Однако в настоящее время диверсифицированные российские компании не являются таковыми. В целом, российские компании находятся в процессе перехода от анализа стандартных бухгалтерских показателей к показателям экономической прибыли. Соответственно, большинство компаний независимо от выбранной стратегии развития не будут иметь высокие значения их рыночной стоимости.

Пятая гипотеза заключается в следующем: *стратегия развития (диверсификация/ фокусирование) не оказывают прямого влияния на стоимость российских компаний.* Поскольку структура компании определяет ее внутреннее управление, логично предположить, что оптимальная структура корпоративного управления определяется выбранной в компании стратегией развития. В частности, многоцелевая стратегия оказывает влияние на размеры, объемы деятельности компании, усложняет организационную структуру, совершенствование которой повышает эффективность решения стратегических задач. В зависимости от выбранной стратегии диверсификации (связанная и несвязанная) действующие в компании параметры корпоративного управления могут оказывать более сильное / слабое влияние на ее эффективность, что обусловлено различными целями руководства при использовании той или иной стратегии. Таким образом, сформулируем следующую гипотезу.

Шестая гипотеза: *выбранная стратегия развития оказывает влияние на оптимальную структуру корпоративного управления.*

В заключение была выдвинута **седьмая гипотеза:** *стратегия диверсификации не ведет к снижению эффективности деятельности в российских компаниях.*

Метод эмпирического анализа

Для проведения регрессионного анализа оценки влияния факторов корпоративного управления на стоимость компаний необходимо определить, какой экономический показатель в контексте данного исследования наилучшим образом измеряет стоимость компании. Стоимость компании складывается из совокупности факторов, которые включают в себя ключевые результаты, отражающие корпоративную стратегию, меру ее реализации и различные финансовые и инвестиционные решения.

Проведенный анализ показателей стоимости позволил выявить, что наиболее оптимально использование показателей экономической прибыли – *Residual Income* [Ивашковская и др., 2007]. Данный подход является более предпочтительным в контексте данной работы, поскольку стратегическая направленность деятельности совета директоров не может быть измерена стандартными бухгалтерскими показателями, так как они не отражают инвестиционных рисков бизнеса, что свидетельствует о невозможности отражения справедливой оценки. Альтернативные подходы, которые применялись ранее, основаны на моделях дисконтированных денежных потоков или внутренней нормы доходности. Однако при применении данных подходов большая часть стоимости компании основана на постпрогнозных значениях, расчет которых представляет особые трудности. Более того, эти значения статичны.

Поэтому в качестве показателя был выбран показатель экономической добавленной стоимости (*EVA*), который имеет ряд преимуществ. Во-первых, данный показатель не является статичным и отражает результаты компании за определенный промежуток времени. Во-вторых, данный показатель, в отличие от бухгалтерских, дает справедливую оценку, поскольку учитывает все издержки на ведение бизнеса, включая фактические и альтернативные. Таким образом, *EVA* позволяет сравнить доходность, приносимую капиталом компании, с альтернативными издержками вложения средств. Учет всех издержек дает возможность корректно оценивать фундаментальную стоимость компании, рост которой и является итоговой целью любой корпоративной стратегии. Кроме того, использование показателя экономической прибыли в отличие от показателей рыночной капитализации и *Q-Тобина* элиминирует эффект макроэкономических и других внешних воздействий на компанию.

В регрессионном анализе будем использовать *EVA* в качестве показателя, отражающего стоимость фирмы. Данный показатель рассчитывается как разница между чистой операционной прибылью после вычета налогов (*NOPAT*) и платы за весь инвестированный в компанию капитал с учетом специальных поправок к прибыли и капиталу, называемых эквивалентами собственного капитала в концепции *EVA* [Ивашковская и др., 2010]:

$$EVA = NOPAT - WACC \cdot CE, \quad (1)$$

где *NOPAT* – посленалоговая операционная прибыль, скорректированная; *WACC* (*Weighted Average Cost of Capital*) – средневзвешенные затраты на капитал; *CE* (*Capital Employed*) – сумма инвестированного капитала.

В относительных показателях данная формула преобразуется к следующему виду:

$$EVA = (ROIC - WACC) \cdot CE, \quad (2)$$

где *ROIC* (*return on total capital*) – доходность инвестированного капитала.

Для расчета показателя средневзвешенной стоимости капитала необходимо произвести расчет стоимости собственного капитала, который производился по модели *CAPM*. Для этого рассчитываются безрисковая ставка процента, премия за риск и коэффициент бета. Стоимость заемных средств определяется как сумма безрисковой ставки и надбавки к этой ставке в размере риска дефолта.

В рамках выдвинутого алгоритма необходимо определить, каким образом будет проведена классификация компаний по стратегии их развития: диверсификация (связанная / несвязанная) и фокусирование.

В эмпирических работах по вопросам диверсификации используются несколько методов измерения степени диверсифицированности компании.

В зарубежной литературе наиболее популярным является метод расчета индекса Херфиндаля [Chen, Chen, 2012]. Индекс Херфиндаля учитывает степень распределения деятельности компании между ее сегментами:

$$H = 1 - \sum_{i=1}^n p_i^2, \quad (3)$$

где *H* – индекс Херфиндаля; *p_i* – доля выпуска компании в *i*-й отрасли по отношению к совокупному выпуску компании в *n* отраслях. Если рассчитанный индекс стремится к 1, значит, компания функционирует в нескольких отраслях и может считаться диверсифицированной [Berry, 1971].

Вторым количественным методом определения степени диверсификации является расчет индекса энтропии, который был использован в работе Lien, Li (2013). Индекс энтропии отражает не только количество отраслей, в которых функционирует компания, но и показывает распределение общей выручки компании между ее сегментами [Jacquemin, Berry, 1979]:

$$E = \sum_{i=1}^n p_i \ln \frac{1}{p_i}, \quad (4)$$

где *E* – индекс энтропии; *p_i* – доля выпуска компании в *i*-й отрасли по отношению к совокупному выпуску компании в *n* отраслях.

Индекс энтропии обладает преимуществом перед индексом Херфиндаля – Хиршмана, поскольку показывает степень связанности между различными отраслями, а также помогает избежать проблемы

мультиколлинеарности, которая возникает при построении регрессионных моделей для расчета индекса Херфиндаля. Однако ни один из приведенных выше методов не может быть применен для определения типа стратегии развития компании, поскольку в России отсутствуют требования о предоставлении отчетности по каждому сегменту.

Таким образом, исследование основывается на использовании формального критерия, кода промышленной классификации SIC (*Standard Industrial Classification*), который был использован в работах Berger и Ofek (1995), Jiraporn et al. (2006), Hoeschle et al. (2012), Ивашковской и др. (2010). Поскольку исследование основано на компаниях российского рынка, то в качестве кода промышленной классификации будем использовать ОКВЭД (Общероссийский классификатор видов экономической деятельности). Компания является диверсифицированной в случае, если входящие в нее бизнес-сегменты имеют различия в кодах ОКВЭД. Если существует различие хотя бы в одной цифре четырехзначного кода, то компания считается диверсифицированной. В противном случае считается, что компания придерживается стратегии фокусирования. В частности, если первая или вторая цифра кода хотя бы одного сегмента отличается от других, то компания имеет стратегию несвязанной диверсификации. Все прочие компании отнесены к компаниям со стратегией связанной диверсификации.

Кроме основных параметров корпоративного управления в модель необходимо включить переменные, характеризующие финансовые показатели компании

во избежание проблем пропущенных переменных и получения смещенных оценок.

Среди данных показателей мы выделили переменную размера компании, выраженную логарифмом общих активов. Включение данной переменной обусловлено тем, что с увеличением размера компании повышаются издержки по ведению корпоративного управления в ней, усложняются задачи совета директоров касательно координации деятельности компании. В случае если совет директоров не справляется с задачей координации менеджмента, наблюдается снижение эффективности корпоративной стратегии, что приводит к увеличению риска, снижению доходности капитала и нарушению устойчивости потока денежных средств. Более того, относительно небольшим компаниям необходимо стремиться к совершенствованию корпоративного управления для получения доступа к рынку капитала и привлечению большего числа инвесторов.

Следует также включать переменную долговой нагрузки, выраженную соотношением долгосрочного заемного капитала к акционерному капиталу. Данная переменная характеризует компанию с точки зрения финансового риска.

Методология

Выдвинутые гипотезы позволили разработать модель влияния факторов корпоративного управления на стоимость компаний российского рынка. В табл. 1 представлены все переменные, подлежащие включению в базовую модель.

Таблица 1. Переменные модели

Наименование переменной	Экономическое содержание
<i>In_dir</i>	Доля независимых директоров к общему числу членов совета директоров
<i>Manag_own</i>	Доля акций, находящаяся в руках менеджмента компании
<i>Gov_own</i>	Доля акций, находящаяся в руках у государства
<i>CEO_uni</i>	Дамми-переменная, принимающая значение «1», если председатель совета директоров и CEO одно лицо, «0» – в противном случае
<i>Divers</i>	Дамми-переменная, принимающая значение «1», если компания диверсифицированная, «0» – в противном случае
<i>Ln_assets</i>	Натуральный логарифм совокупных активов компании
<i>CS</i>	Соотношение долгосрочного заемного капитала к акционерному капиталу
<i>Capex</i>	Размер капитальных вложений
<i>Growth</i>	Темп роста выручки

Источник: составлено автором.

Таким образом, полученная регрессионная модель анализа влияния корпоративного управления на эффективность российских компаний выглядит следующим образом:

$$EVA_{it} = \alpha + \beta_1 \cdot \ln_dir_{it} + \beta_2 \cdot Manag_own_{it} + \beta_3 \cdot gov_own_{it} + \beta_4 \cdot CEO_unity_{it} + \beta_5 \cdot divers_{it} + \beta_6 \cdot Ln_{assets_{it}} + \beta_7 \cdot Capex_{it} + \beta_8 \cdot Growth_{it} + \varepsilon_{it} \quad (5)$$

где EVA_{it} – экономическая добавленная стоимость i -й компании в год t ; \ln_dir_{it} – доля независимых директоров к общему числу членов совета директоров i -й компании в год t ; $manag_own_{it}$ – доля акций, находящаяся в руках менеджмента i -й компании в год t ; gov_own_{it} – доля акций, находящаяся в руках у государства i -й компании в год t ; CEO_unity_{it} – дамми-переменная, принимающая значение «1», если председатель совета директоров и CEO одно лицо, «0» – в противном случае i -й компании в год t ; $divers_{it}$ – дамми-переменная, принимающая значение «1», если компания диверсифицированная, «0» – в противном случае; $assets_{it}$ – объем активов i -й компании в год t ; CS_{it} – структура капитала i -й компании в год t ; $Capex_{it}$ – капитальные вложения i -й компании в год t ; $Growth_{it}$ – темп роста выручки i -й компании в год t .

Описание данных

На следующем этапе, после выборки метода эмпирического анализа и разработки модели была сформирована выборка российских компаний, на основе которой проводилась оценка влияния факторов корпоративного управления на эффективность их деятельности и дальнейшие расчеты финансовых показателей.

Для проведения исследования был выбран период 2013–2015 гг. Выбор данного временного интервала обусловлен тем, что 2013 г. был относительно стабильным для России, а в период с 2011–2012 гг. произошли изменения в корпоративном управлении за счет введения новых законов, таких как Федеральный закон «О центральном депозитарии», внесения изменений в федеральные законы «О рынке ценных бумаг» и «Об акционерных обществах»¹. Кроме того, в 2014 г. был принят усовершенствованный Кодекс корпоративного управления, более половины крупных компаний уже применяют в своей деятельности большинство рекомендаций этого документа. Вступление в силу новых законов и поправок к ним должно стимулировать повышение уровня корпоративного управления в компании, за счет чего эффективность компании должна улучшаться. 2016 г. не был включен в выборку, поскольку не все исследуемые качественные и финансовые показатели были доступны для сбора данных.

Для сбора данных по характеристикам корпоративного управления использовались годовые отчеты компаний, устав и другие официальные документы и аналитические записки. Для проведения расчетов финансовых показателей была использована база данных «Спарк», а также отчеты компаний с их официальных сайтов для расчета объясняющих переменных.

Как уже отмечалось ранее, для определения степени диверсифицированности компании был использован код ОКВЭД, который также был доступен в карточке компании в базе данных «Спарк». Однако в процессе сбора данных были сделаны некоторые выводы относительно использования данного критерия: в большинстве случаев указанный код ОКВЭД не отражает основную отрасль функционирования компании, кроме того, некоторые изменения в кодах ОКВЭД являются формальными. Учитывая данные факты, помимо использования данного критерия были детально изучены годовые отчеты компаний и структура выручки по сегментам, что позволило сделать вывод относительно уровня диверсификации компании.

Список анализируемых компаний был определен по рейтингу, составленному информационным агентством «Эксперт 400» по объемам реализации продукции за 2015 г. Первоначально были взяты 200 топ-компаний, далее из них были исключены финансовые организации, иностранные компании и компании, данные по которым не были доступны из официальных источников. Таким образом, в выборку вошли 72 компании, что составило 205 наблюдений.

Эмпирическая часть: регрессионный анализ

Начнем анализ результатов с агрегированной выборки по российским компаниям вне зависимости от стратегии развития. В период с 2013 по 2015 г. в анализируемых компаниях в 69 из 100% наблюдались отрицательные значения экономической добавленной стоимости. Данные результаты свидетельствуют о низкой рентабельности инвестированного капитала и неэффективном распределении ресурсов в российских компаниях, что является следствием финансового кризиса. Разброс полученных значений EVA велик, наибольшее значение данного показателя составляет примерно 617 млрд руб. Переменная ROE характеризуется медианным значением, равным 11,71, разброс значений данного показателя значительно меньше, нежели показателя EVA . Поскольку дамми-переменная совмещения должности генерального директора и председателя совета директоров в 95% наблюдений имеет значение «0», данная переменная была исключена из выборки при первоначальном анализе данных.

¹ Положение ЦБР от 10.04.2014 № 06-52/2463 «О кодексе корпоративного управления».

Таблица 2. Описательная статистика переменных (млрд руб.)

	Количество наблюдений	Среднее	Стандартное отклонение	Минимум	Максимум	Медиана
<i>EVA</i>	205	–45,09	242,16	–2253,53	617	–5,42
<i>ROE</i>	205	14,81	64,70	–185,23	282,70	11,71
<i>ln_A</i>	205	18,81	1,85	9,30	23,29	18,79
<i>CS</i>	205	1,86	12,89	–22,09	40,86	0,47
<i>in_dir</i>	205	0,20	0,21	0	0,80	0,14
<i>govern_own</i>	205	16,31	32,86	0	100	0
<i>manag_own</i>	205	2,63	11,95	0	97,41	0
<i>growth</i>	205	1,65	1,90	0	10,39	0,89
<i>capex</i>	205	6,01	1060	0	4830	800

Источник: расчет автора в программе Stata.

В табл. 2 представлены описательные статистики зависимых переменных *EVA*, *ROE* и регрессоров после удаления выявленных выбросов для каждой модели (проверка на наличие выбросов осуществлялась на основе *Studentized residuals*, расстояния Кука и показателя *DFITS*).

Заметим, что в полученном наборе данных отсутствуют пропущенные переменные. Выборка характеризуется низким уровнем доли независимых директоров, которые в большинстве наблюдений составляют менее 1/3 от общего числа совета директоров, а также относительно небольшой долей государства: в 33 наблюдениях выборки доля государства составляет более 50%, 16 наблюдений представляют компании со 100%-ным государственным участием и 153 наблюдения – компании без государственного участия. Стоит также отметить, что медианное значение показателя доли акций у менеджмента равно 0, что говорит о низкой доле участия менеджмента в акционерном капитале российских компаний.

Рассмотрев матрицу парных корреляций между зависимыми переменными *EVA* и *ROE* и регрессорами, можно сделать вывод о том, что выбранные регрессоры не коррелируют друг с другом. Это также подтверждается тестом на мультиколлинеарность *VIF* (*Variance Inflation Factor*), все значения которого имеют значения меньше 5. Проведение формальных тестов *sfrancia*, *swilk*, *sktest* позволило отвергнуть нулевую гипотезу о нормальности распределения остатков, однако поскольку полная выборка имеет средний размер (205 наблюдений), то мы можем отказаться от использования процедуры бутстрапирования. Рассмотрим полученные результаты регрессионного анализа на полной выборке российских компаний.

Для анализа собранных данных были использованы короткие панельные линейные регрессии для зависимых переменных *EVA* и *ROE*, которые включают три анализируемых года и 72 компании. Для начала была определена базовая модель регрессии. В связи с тем, что выборка составила 205 наблюдений, включение большого количества регрессоров, а именно контрольных переменных, являлось нежелательным, поскольку могло привести к проблемам с мультиколлинеарностью, а также низкой значимостью как отдельных факторов, так и регрессии в целом. Тестирование различных моделей и их спецификаций показало, что в базовой модели регрессии следует оставить все качественные показатели, а также переменную размера компании и долговой нагрузки.

Обратимся к анализу модели, где в качестве переменной эффективности деятельности компании выступает переменная *EVA*. Тестирование моделей сквозной регрессии, регрессии с фиксированными и случайными эффектами показало, что в нашем случае подходит модель со случайными эффектами. Для этого были проведены тесты Вальда, Бройша – Пагана и Хаусмена. Тест Вальда проверяет гипотезу о равенстве нулю всех индивидуальных эффектов и сравнивает модель с фиксированными эффектами со сквозной регрессией. Поскольку данный тест показал, что *p*-уровень < 0,01, то основная гипотеза отвергается, и модель с фиксированными эффектами лучше подходит для описания данных, чем модель простой регрессии. Тест Бройша – Пагана является тестом на наличие случайного индивидуального эффекта и сравнивает сквозную регрессию с регрессией со случайными эффектами. В нашем случае нулевая гипотеза отвергается, что позволяет сделать вывод о том, что регрессия со случайными

эффектами лучше описывает полученную выборку. Заключительный тест Хаусмена на сравнение регрессии со случайными эффектами с регрессией с фиксированными эффектами позволил принять нулевую гипотезу о том, что индивидуальные эффекты являются случайными, так как p -уровень = 0,89. Соответственно, наилучшей моделью является модель со случайными эффектами (табл. 3).

Таблица 3. Результаты регрессионной модели со случайными эффектами и зависимой переменной *EVA* на полной выборке

Переменная	Значение коэффициента
<i>in_dir</i>	40,63* (86,65)
<i>gover_own</i>	-1,27 (1,57)
<i>manag_own</i>	-0,06 (0,70)
<i>ln_Assets</i>	-27,05** (11,54)
<i>CS</i>	-0,08 (0,89)
<i>Constant</i>	493,83** (215,14)
<i>N. of cases</i>	205
<i>Wald chi2(5)</i>	11,05
<i>Prob>chi2</i>	0,04

* $p < 0,10$; ** $p < 0,05$; *** $p < 0,01$.

Источник: расчет автора в программе Stata.

Полученная регрессия характеризуется относительно невысоким уровнем статистики Вальда (11,05), однако p -уровень данного теста позволяет отвергнуть нулевую гипотезу о равенстве нулю коэффициентов перед регрессорами, что свидетельствует об общей значимости модели на 5%-ном уровне значимости и адекватности построенной модели. Корреляция регрессоров с ненаблюдаемыми случайными эффектами равна 0, что является важным критерием, лежащим в основе модели, в противном случае оценки окажутся несостоятельными. Кроме того, на 5%-ном уровне значимости обнаружена отрицательная взаимосвязь переменной логарифма активов, что соответствует заявленной в исследовании логике. Переменная доли независимых директоров в составе совета (*in_dir*) характеризуется положительной взаимосвязью с эффективностью деятельности компании и значима на 10%-ном уровне значимости.

Однако остальные заявленные в модели переменные оказались статистически незначимыми на полной выборке. Незначимость переменной доли менеджмента

в акционерном капитале может быть объяснена тем, что значения данного показателя по выборке практически равны нулю, вследствие чего не удалось выявить взаимосвязи между зависимой переменной *EVA* и показателем *manag_own*. Что касается незначимости переменной доли государства, то следует обратиться к делению компаний по типу диверсификации, так как данный факт оказывает существенное влияние на взаимосвязь данного показателя и эффективностью деятельности компании.

Далее перейдем к рассмотрению модели с зависимой переменной рентабельности собственного капитала – *ROE*. Тестирование моделей сквозной регрессии, регрессии с фиксированными и случайными эффектами показало, что в нашем случае подходит модель сквозной регрессии. Данная модель предписывает одинаковое поведение всем объектам выборки во все моменты времени и оценивает методом наименьших квадратов. Поскольку наша модель обладает гетероскедастичностью, то для элиминирования данного эффекта применим обобщенный метод наименьших квадратов. Итоговые оценки коэффициентов регрессии представлены в табл. 4.

Таблица 4. Результаты сквозной регрессии и зависимой переменной *ROE* на полной выборке

Переменная	Значение коэффициента
<i>in_dir</i>	-47,05** (21,25)
<i>gover_own</i>	-0,17* (0,09)
<i>manag_own</i>	0,39 (0,69)
<i>ln_Assets</i>	-0,29 (2,51)
<i>CS</i>	2,95*** (0,97)
<i>Constant</i>	18,13 (46,63)
<i>N. of cases</i>	204
<i>Adj R-squared</i>	0,13
<i>Prob > F</i>	0,0026

* $p < 0,10$; ** $p < 0,05$; *** $p < 0,01$.

Источник: расчет автора в программе Stata.

Полученная сквозная регрессия значима на 1%-ном уровне значимости, что свидетельствует о совокупной значимости включенных в модель факторов.

Скорректированный коэффициент детерминации имеет невысокое значение, однако данный факт не является существенной проблемой, поскольку в рамках анализа ставится цель не обнаружить все детерминанты эффективности деятельности компании, а оценить взаимосвязь интересующих нас факторов.

Модель имеет несколько статистически значимых переменных. На 1%-ном уровне значимости значима переменная структуры капитала (*CS*), однако данная переменная имеет положительный знак перед коэффициентом. Выявлена также отрицательная взаимосвязь переменной доли независимых директоров в составе совета директоров (*in_dir*). На 10%-ном уровне значимости выявлена отрицательная взаимосвязь доли государства в акционерном капитале компании, переменная доли акций во владении менеджмента оказалась незначима. Полученные результаты могут свидетельствовать о том, что зависящая переменная *ROE* не является адекватной переменной для измерения эффективности деятельности компании в контексте измерения стратегической направленности в деятельности совета директоров и других характеристик корпоративного управления. Таким образом, дальнейший анализ в разрезе стратегий развития компаний будет проведен для зависимой переменной *EVA* и интересующих нас регрессоров.

Тестирование в условиях разделения выборки по типу стратегии развития

В условиях деления компаний по выбранной стратегии развития интерес представляет проведение сравнений на равенство генеральных средних в двух подгруппах, диверсификации и фокусирования, по переменной экономической добавленной стоимости и характеристик корпоративного управления.

Проверка на статистическую значимость разницы в средних при помощи *t*-теста показала, что на 5%-ном уровне значимости не существует разницы в средних значениях показателя *EVA* для компаний со стратегией диверсификации и фокусирования. Данный факт подтверждает седьмую гипотезу и позволяет утверждать, что стратегия диверсификации не ведет к снижению эффективности деятельности российских компаний. Что касается других переменных, то также не было выявлено статистически значимых различий в средних значениях показателей доли государства и менеджмента в акционерном капитале компаний, а также доли независимых директоров. Полученный результат опровергает заявленную шестую гипотезу о том, что выбранная стратегия развития оказывает влияние на действующие в компаниях механизмы корпоративного управления.

Для того чтобы проследить взаимосвязь различных характеристик корпоративного управления и эффективности деятельности компании в зависимости от выбранной стратегии развития, необходимо разбить выборку на три подвыборки и отдельно рассмотреть данные по компаниям со стратегией связанной и несвязанной диверсификации, а также со стратегией фокусирования. В табл. 5 представлено количество компаний и наблюдений в каждой выделенной группе.

Таблица 5. Распределение компаний по стратегиям диверсификации и фокусирования

	Количество компаний	Количество наблюдений
Диверсификация	29	86
в том числе:		
несвязанная	7	20
связанная	22	66
Фокусирование	43	119
Итого	72	205

Источник: составлено автором.

Построение линейных панельных регрессий для трех подвыборок и сравнение моделей с фиксированными, случайными эффектами, модели *between* и сквозной регрессии позволили сделать вывод, что наиболее адекватно описывает данные регрессия со случайными эффектами для компаний со стратегиями фокусирования и связанной диверсификации. Для выборки компаний несвязанной диверсификации согласно итогам тестов Вальда и Бройша – Пагана подходит модель сквозной регрессии. Количество наблюдений позволило оценить все регрессоры только по компаниям со стратегией фокусирования. Из выборки по компаниям связанной диверсификации, куда входят 66 наблюдений, была удалена переменная доли менеджмента в акционерном капитале компании (*manag_own*), а в сквозной регрессии, состоящей из 20 наблюдений, были оценены лишь переменная логарифма совокупных активов (*ln_Assests*), доля независимых директоров (*in_dir*) и доля государства в акционерном капитале компании (*gover_own*). Итоговые результаты регрессионного анализа представлены в табл. 6.

Рассмотрим значимость каждой переменной отдельно по подвыборкам. Переменная доли независимых директоров в составе советов директоров российских компаний на 5%-ном уровне значимости положительно влияет на их эффективность в компаниях со стратегией фокусирования, а на 10%-ном уровне значимости положительно влияет на показатель *EVA* в компаниях со стратегией несвязанной диверсификации.

Таблица 6. Результаты регрессионного анализа для компаний со стратегией диверсификации и фокусирования

Переменная	Стратегия фокусирования	Стратегия связанной диверсификации	Стратегия несвязанной диверсификации
	Регрессия со случайными эффектами	Регрессия со случайными эффектами	Сквозная регрессия
<i>In_dir</i>	39,96** (20,05)	-79,90 (115,59)	110,45* (35,96)
<i>Manag_own</i>	0,5 (0,32)	—	—
<i>Gover_own</i>	-0,21 (0,19)	3,58*** (0,97)	-4,15* (2,82)
<i>Ln_Assets</i>	-7,20*** (2,63)	17,55 (25,62)	-277,56*** (56,92)
<i>CS</i>	-0,10 (1,10)	-0,12 (0,57)	—
<i>Constant</i>	112,45* (47,87)	-304,26 (491,54)	480,20*** (111,94)
<i>N. of cases</i>	119	66	20
<i>Wald chi2(5)</i>	13,36	14,50	—
<i>Prob > chi2</i>	0,02**	0,01**	—
<i>R-squared</i>	—	—	60,96
<i>Prob > F</i>	—	—	0,08*

* $p < 0,10$; ** $p < 0,05$; *** $p < 0,01$.

Источник: расчет автора в программе Stata.

Стоит отметить, что значение коэффициента для компаний несвязанной диверсификации значительно превышает значение данного показателя по компаниям со стратегией фокусирования, что соответствует заявленной в исследовании логике. Однако данный показатель оказался незначим на выборке из компаний со стратегией связанной диверсификации.

Что касается показателя доли менеджмента в акционерном капитале компаний, то данный показатель, как и в регрессии на агрегированной выборке, незначим на приемлемом уровне значимости на выборке из компаний со стратегией фокусирования, соответственно, делать какие-либо выводы относительно его взаимосвязи с показателем *EVA* не имеет смысла.

Показатель доли государства в акционерном капитале российских компаний на выборке из компаний связанной диверсификации положительно влияет на эффективность их деятельности на 1%-ном уровне значимости, в то время как прослеживается отрица-

тельная взаимосвязь данного показателя на выборке из компаний со стратегией несвязанной диверсификации на 10%-ном уровне значимости. На выборке компаний со стратегией фокусирования показатель *gover_own* статистической значимости не имеет.

Что касается контрольных переменных, включенных в модель, то показатель структуры капитала *CS* незначим для всех трех подвыборок, а показатель логарифма совокупных активов значим на 1- и 5%-ном уровне значимости для компаний со стратегией фокусирования и несвязанной диверсификации соответственно и имеет отрицательный знак перед коэффициентом.

Общая значимость трех моделей высокая, модели регрессий со случайными эффектами значимы на 5%-ном уровне значимости, что свидетельствует о совокупной значимости включенных факторов, модель сквозной регрессии значима на 10%-ном уровне значимости.

Обсуждение полученных результатов

Построение моделей регрессионного анализа с двумя зависимыми переменными *ROE* и *EVA* позволяют сделать вывод о том, что при проведении анализа влияния выбранных компонентов корпоративного управления на эффективность деятельности компаний с помощью стандартного бухгалтерского показателя *ROE* нельзя отследить взаимосвязь характеристик корпоративного управления и эффективностью деятельности компании. Это связано с тем, что показатель *ROE* отражает лишь операционную деятельность компании и не учитывает управленческие аспекты и альтернативные издержки ведения бизнеса. Данный результат также подтверждается в работе Adjaoud et al. (2007). Таким образом, показатель *EVA* является наиболее адекватной мерой измерения эффективности деятельности компаний в контексте данной работы.

Далее перейдем к анализу результатов, полученных в результате тестирования поставленных в работе гипотез о направлении влияния отдельных компонентов корпоративного управления на эффективность деятельности российских компаний.

Первая гипотеза о положительном влиянии доли независимых директоров в составе совета директоров российских компаний не отвергается, поскольку на полной выборке было получено статистически значимое положительное влияние данного показателя на эффективность деятельности компаний. Данный факт свидетельствует о том, что увеличение независимых директоров приводит к повышению эффективности российских компаний. Данный факт объясняется тем, что с более высокой долей независимых членов совета директоров увеличивается качество принятия верных решений [Амбардншвили, Березинец, 2017]. Кроме того, независимые директора улучшают осуществление надзора над руководством компании, что способствует повышению эффективности ее деятельности и приводит к увеличению рыночной стоимости. Аналогичные результаты были получены в работах Rosenstein и Wyatt (1990), а также Barnhart et al. (1994).

В условиях разделения выборки по типам стратегии развития были получены следующие результаты. Доля независимых директоров *in_dir* в компаниях со стратегией фокусирования оказывает статистически значимое положительное влияние на эффективность их деятельности. Однако взаимосвязь данного фактора неодинакова для компаний со стратегией диверсификации. В частности, значение коэффициента перед показателем *in_dir* на выборке из компаний со стратегией несвязанной диверсификации значительно превышает значение коэффициента того же показателя на выборке из компаний со стратегией фокусирования. Он свидетельствует о том, что увеличение доли независимых директоров в компаниях

со стратегией несвязанной диверсификации имеет большую взаимосвязь с показателем *EVA*, поскольку управление компаниями такого типа требует наличие различных навыков и экспертных знаний, которыми обладают независимые директора, что облегчает принятие решений советами. Примером компании такого типа является ПАО «АФК Система», обладающая наивысшим значением доли независимых директоров (0,64) и имеющей наибольшее значение показателя *EVA* в своей группе. Незначимость данного показателя на выборке из компаний со стратегией связанной диверсификации может быть обусловлена тем, что 2/3 компаний данной подвыборки имеют независимых директоров и данный фактор является несущественным касательно эффективности деятельности компаний такого типа.

При делении компаний на подвыборки было выявлено, что увеличение доли независимых директоров в компаниях со стратегией несвязанной диверсификации имеет большую взаимосвязь с показателем *EVA* нежели в компаниях со стратегией фокусирования, что обусловлено сложностью принятия решений в компаниях такого типа. Полученный результат позволяет частично принять вторую гипотезу.

Третья гипотеза о положительном влиянии доли акций, принадлежащих менеджменту компании, не нашла подтверждения в проведенном анализе как на полной выборке, так и в условиях деления компаний по типам стратегии развития. Данный факт, вероятнее всего, обусловлен тем, что значения данного показателя по выборке практически равны нулю, вследствие чего не удалось выявить взаимосвязи между зависимой переменной *EVA* и показателем *manag_own*. Исследователи в целом едины во мнении относительно положительной связи между эффективностью компании и участием в собственности компании директоров и менеджмента [Pfeffer, 1972; Bradley et al., 1988], однако данные исследования были проведены на выборках других стран, где структура собственности является более распыленной.

Четвертая гипотеза о наличии значимого положительного влияния акций компаний у государства на эффективность их деятельности также подтвердилась лишь частично. Было выявлено, что присутствие государства в числе собственников компании повышает ее эффективность в случае, если компания придерживается стратегии связанной диверсификации. Данный факт обусловлен тем, что большинство компаний со стратегией связанной диверсификации являются отраслеобразующими предприятиями со структурой вертикально-интегрированных холдингов. К положительным аспектам участия государства в акционерном капитале данных компаний относится снижение затрат на заемный капитал, поскольку компании с государственным участием обладают большим доверием со стороны кредиторов. Примерами компаний такого типа являются ПАО «Объединенная авиастроительная корпорация» с долей государственного

участия в акционерном капитале 90% и ПАО «РЖД» с долей 100%. Такие компании могут успешно существовать только при условии значительной поддержки со стороны государства. Государство, в свою очередь, заинтересовано в поддержании должного уровня эффективности данных компаний, поскольку они оказывают влияние на экономическую стабильность и развитие России в целом. Что касается компаний со стратегией несвязанной диверсификации, то для них участие государства в акционерном капитале лишь препятствует успешному развитию, что также подтвердилось статистическим путем. Государство не склонно к вложениям в рискованные направления бизнеса, напротив, оно стремится укрупнять имеющиеся бизнес-сегменты либо следовать стратегии связанной диверсификации. Однако чем выше риски, тем выше доходность в случае успеха. Таким образом, диверсификация бизнеса в несвязанную отрасль может принести компании значительные выгоды. Примером успешной компании со стратегией несвязанной диверсификации является ПАО «АФК-Система», в которой нет государственного участия.

Однако данный показатель оказался незначим на выборке из компаний со стратегией фокусирования. Полученный результат может объясняться тем, что попавшие в выборку компании являются односторонними компаниями-гигантами, представляющими наиболее влиятельные компании в своей отрасли. 27 компаний из 116 в данной подвыборке – компании с государственным участием, однако доля государства в их акционерном капитале не является значимым фактором, влияющим на их эффективность. Примерами компаний со стратегией фокусирования выступают компания ПАО «Аэрофлот» с долей государства 51,17% и ПАО «Авиакомпания «Сибирь» без государственного участия. Обе компании являются лидерами на российском рынке авиаперевозок.

Кроме того, было отмечено, что компании со стратегией диверсификации и фокусирования не имеют статистически значимых различий в средних значениях экономической добавленной стоимости. Это позволяет не отвергнуть пятую гипотезу о том, что стратегия диверсификации не ведет к снижению эффективности деятельности в российских компаниях. Данный результат был получен как по общей выборке диверсифицированных компаний, так и в разрезе деления компаний на связанную и несвязанную диверсификацию.

Анализируя полученные результаты, можно утверждать, что влияние отдельных компонентов корпоративного управления на эффективность деятельности компании зависит от выбранной стратегии развития. Это позволяет не отвергнуть шестую гипотезу о том, что в зависимости от выбранной стратегии развития компоненты корпоративного управления оказывают различное влияние на эффективность деятельности компании. Полученный результат свидетельствует о том, что оптимальная структура корпоративного

управления варьируется в зависимости от выбранной компанией стратегией развития: связанной или несвязанной диверсификации либо фокусирования.

Было также получено, что компании со стратегией диверсификации и фокусирования не имеют статистически значимых различий в средних значениях экономической добавленной стоимости, что позволяет не отвергнуть седьмую гипотезу о том, что стратегия диверсификации не ведет к снижению эффективности деятельности в российских компаниях. Данный результат был получен как по общей выборке диверсифицированных компаний, так и в разрезе деления компаний на связанную и несвязанную диверсификацию.

Таким образом, российским компаниям следует повышать уровень корпоративного управления путем увеличения доли независимых директоров вне зависимости от типа стратегии развития. Компаниям со стратегией несвязанной диверсификации рекомендуется развиваться без участия государства в их акционерном капитале, в то время как компаниям со стратегией связанной диверсификации требуется поддержка со стороны государства. Кроме того, необходимо совершенствовать системы и концепции управления компаниями, что позволит им быть более привлекательными для зарубежных инвесторов и улучшить как операционную деятельность, так и инвестиционную. При использовании стратегии несвязанной диверсификации наличие выбранных компонентов в структуре корпоративного управления также оказывает еще большее влияние на их эффективность. Это обусловливается более широким кругом деятельности и сложностью организационно-управленческой структуры данных компаний. Ошибочные решения совета директоров и менеджмента могут привести к выходу данных компаний в неперспективные отрасли, следствием чего будет являться снижение эффективности их деятельности.

Результаты данной работы могут использоваться акционерами и членами совета директоров компании при формировании структуры корпоративного управления с целью уменьшения агентского конфликта между менеджментом и акционерами. Они также будут интересны для оценки потенциальных рисков инвесторами, рассматривающими возможность вложения средств в ту или иную компанию.

К возможным ограничениям проведенного исследования можно отнести:

- использование в качестве показателей эффективности деятельности компании по одному показателю из группы бухгалтерских и группы показателей экономической прибыли;
- ограниченность выборки, состоящей из 205 наблюдений, что стало возможной причиной незначимости некоторых переменных регрессионного анализа.

В целом, исходя из полученных значений финансовых показателей и качественных характеристик корпоративного управления и их описательной статистики, прослеживается тот факт, что в зависимости от выбранной стратегии развития (диверсификация или фокусирование) отдельные механизмы корпоративного управления имеют различные удельные веса в общей структуре корпоративного управления для компаний с разными стратегиями развития. Для диверсифицированных компаний характерно наличие большей доли независимых директоров, а также участие менеджмента в акционерном капитале компании. Таким образом, перспективным направлением для продолжения исследования является оценка влияния отдельных механизмов корпоративного управления на стоимость российских компаний в разрезе стратегий их развития.

Заключение

Цель исследования заключалась в оценке влияния отдельных элементов структуры корпоративного управления в диверсифицированных компаниях российского рынка на эффективность деятельности компаний. Поскольку выбранная стратегия развития определяет структуру внутреннего управления компаний, то изучение корпоративного управления в рамках однонаправленных и диверсифицированных компаний представляло особый интерес.

В ходе работы было выявлено, что интерес представляют такие характеристики корпоративного управления, как доля независимых директоров в составе совета, доля акций, принадлежащих менеджменту компании, и участие государства в акционерном капитале компании. На основе собранных данных по характеристикам корпоративного управления и проведенных расчетов было выявлено, что в среднем российские компании характеризуются отрицательными значениями экономической добавленной стоимости, что говорит о низкой рентабельности инвестированного капитала и неэффективном распределении ресурсов. Среднее значение показателя рентабельности собственного капитала также находится на достаточно низком уровне.

Что касается характеристик корпоративного управления, то в зависимости от выбранной стратегии развития прослеживается различная структура корпоративного управления. В частности, диверсифицированные компании характеризуются более независимым советом директоров, а также большим участием государства в акционерном капитале компании.

Проведенный анализ свидетельствует о том, что с увеличением доли независимых директоров, а также участия государства в акционерном капитале компании увеличивается стоимость российских компаний. Российским компаниям необходимо совершенствовать систему их управления как в плане корпоративного управления, так и финансового анализа на основе концепции стоимости.

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Effect of the Application of Internal Corporate Governance Mechanisms on the Value of Companies With Diversification and Focusing Strategies

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Annotation

The perspective of corporate governance in Russia is a topical issue nowadays. It is caused by the fact that the Russian business conditions demand special approach to formation of an optimum corporate governance system.

The purpose of the study is to assess the impact of individual components of corporate governance on the value of companies with two development strategies: diversification and focusing. The main hypothesis considered in the work is that, depending on the chosen development strategy (diversification or focus), different corporate governance mechanisms have a different impact on the value of these companies. To substantiate the hypothesis put forward, a regression model of the influence of the main factors of corporate governance on the economic value added indicator (EVA) has been constructed.

As a result of the conducted research for companies using diversification and focusing strategies, the influence of such corporate governance factors as the share of independent directors on the board, the share of shares owned by the company's management, and the state's participation in the share capital of the company was revealed. Based on the results of the regression model constructed for the sample, we can draw the following conclusions: depending on the chosen development strategy, a different structure of corporate governance is traced, in particular, for diversified companies a more independent board of directors is characteristic, as well as greater state participation in the share capital the company. In the context of a variety of diversification strategies, the focus is on only two strategies. In prospective studies, it is supposed to consider the influence of other factors of corporate governance (for example, corporate debt, dividend payment form) on companies with related and unrelated diversification strategies.

Compared to the existing research, a comprehensive study of the influence of such corporate governance factors as the share of independent directors on the board, the share of shares owned by the company's management, and state participation in the company's share capital on the results of Russian companies implementing diversification and focusing strategies, made practice-oriented conclusions.

The results of the study can be useful for managers and managers of corporate structures in order to assess the effectiveness and efficiency of the existing management system in the company.

Keywords: diversified company, corporate governance, emerging markets, economic value added

JEL: G34, G39

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The Reaction of Russian Public Companies' Stock Prices to Sanctions Against Russia

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Abstract

The imposition of sanctions by foreign countries against Russia since 2014 and their prolongation for the following several years resulted in significant changes in Russian economics. In the first instance, economic sanctions were aimed towards the weakening of companies by banning exports and imports of certain goods, closeout or suspension of joint venture projects, as well as limiting the provision of financing. However, one can postulate that these sanctions influenced the companies to different extents. This research offers an analysis of the changes in share prices of Russian public companies of the MICEX index in response to sanctions against Russia in 2014–2016. The research methodology is based on the event study approach, which allows estimation of a short-term response of the shares' prices to information release. The results of this paper confirm that imposition and prolongation of sanctions resulted in a significant fall in share prices. With an average daily return on shares of the Russian stock market companies of 0.1%, a fall in return of 0.17% points per day as a result of the imposition of sanctions by the USA is economically significant. Apart from that, the sanctions influenced financially dependent companies to a greater extent. Contrary to theoretical assumptions of a greater influence of sanctions imposed by the countries with which a more close economic cooperation had been established, it transpired that the imposition of sanctions by the USA resulted in the greatest fall in prices for shares. Also, an important result indicated in this paper is the fact that imposition of targeted sanctions against certain companies has not entailed a greater impact of the sanctions on such companies. This is indicative of the ineffectiveness of targeted sanctions imposed on Russia. The influence of the government share in ownership of companies and the differences of response of the shares' prices depending on the company industry sector have not been confirmed.

Keywords: sanctions; Russia; stock market; public companies; event study; abnormal return

JEL: G14, F51, G30

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Introduction

In March of 2014, in spite of warnings by the USA of possible grave negative implications Russia recognized the results of the referendum concerning Crimea joining Russia. In retaliation, the USA, European Union (EU) and a series of countries imposed sanctions against certain natural and legal persons of the Russian Federation. The sanctions demonstrated disagreement on the Russian policy as regards Crimea and were positioned as a tool of pressure upon Russia in order to reconcile the conflict and to protect territorial integrity of Ukraine. Later escalation of conflict in Ukraine triggered prolongation of sanctions and imposition of new sanctions as well as other countries' joining the policy of imposition of limitations against Russia.

The sanctions comprise such economic limitations as restricted access to financial resources, the freezing of assets, the termination of business relationships and the banning of imports and exports of certain goods. Apart from that, sanctions against Russia vary by scale: aside from comprehensive sanctions, also targeted sanctions against certain persons and organizations were imposed. However, the degree of their impact remains questionable because apart from an evident detrimental effect sanctions resulted in decrease of competition for Russian companies in the domestic market and thus in promotion of their development.

Certainly, economic sanctions against Russia carry long-term economic consequences and it is necessary to evaluate in their entirety the overall economic losses caused by their imposition. However, using the stock market data as an indicator of the economic situation, one can evaluate changes in investors' expectations because of information about sanctions. Consequently, the purpose of the present research is evaluation of the impact of sanctions against Russia on the price of shares of Russian public companies in the short term. This will help us to define which companies suffered to a greater extent from the imposition of sanctions and need government support, and also to reveal the features of the companies which helped to mitigate the impact of foreign limitations.

Review of Literature

Sanctions in international practice and their effectiveness

The term "sanctions" has no unified agreed-upon definition; in the legislation of each country it tends to have its own definition. Thus, in accordance with the legislation of the Russian Federation, economic sanctions are defined by the Federal Law "On Special Economic Measures" No. 281-FZ of December 30, 2006 as "special economic measures" which "are applied in cases of a set of circumstances which require an urgent response to an internationally wrongful act or a hostile act of a foreign state or its authorities and officials which threaten interests and security of the Russian Federation and (or) acts violating

rights and liberties of its citizens and in accordance with the resolutions of the Security Council of the United Nations Organization". Researchers give different definitions of economic sanctions but in general they are understood as "restrictive or prohibitive economic measures" [Davis, Engerman, 2003]. From a theoretical point of view, the purpose of sanctions is to put pressure on a country in order to make it change its policy, to restrict a country's actions and (or) send a certain message [Giumelli, Ivan, 2013; Veebel, Markus, 2015].

Sanctions are a rather widespread practice in foreign relations because they may be considered as a means of influencing which is less radical and less harmful for all parties in comparison to military operations [Pape, 1997]. Thus, for example, the EU has a regularly updated document entitled "EU Restrictive Measures in Force" which contains a list of more than 30 countries as of 2017 and a list of economic restrictions applied against those countries. The most discussed sanctions on a top-level as well as by academic community are the sanctions against Iran [Carswell, 1981; Torbat, 2005; Esfandiary, Fitzpatrick, 2011; Fayazmanesh, 2003; Kozhanov, 2011; O'Sullivan, 2010; Patterson, 2013; Kozhanov, 2011].

In the majority of cases analysis of the economic repercussions of sanctions is of a descriptive nature which does not separate sanctions effects from other factors. So, researchers marked such sanctions' consequences variously as a significant drop in the exchange rate of the domestic currency in Iran [Amuzegar, 1997], a rise in the inflation and unemployment rate in Libya [Collins, 2004], and a decline in economic activity in Haiti [Gibbons and Garfield, 1999].

Previous theoretical and empirical papers presume that the power of impact of sanctions depends on many factors but, first of all, on the nature of imposed restrictions and correlation of strength of the country imposing sanctions and the country against which they are used. Researchers make a point that the smaller the country is, the less severe sanctions suffice to make it change its conduct. And, vice versa, large and self-sufficient countries resist sanctions easier than small ones [Kaempfer, Lowenberg, 2007; Jing, Kaempfer, Lowenberg, 2003]. Another factor distinguished by researchers as an indicator of sanctions' impact power is the strength of relationship between the country imposing sanctions and the country against which they are used [Jing, Kaempfer, Lowenberg, 2003; Pape, 1997]. It is affirmed that the stronger trade and economic relations between the two countries are the more significant the effect of sanctions imposed by one of them. Besides, presumably sanctions should be more effective if there is a strong inequality in distribution of incomes of the country's citizens [Pape, 1997]. Apart from that, Pape [1997] argues that the effect of economic sanctions may be strengthened if they are combined with military force.

The effectiveness of economic sanctions as an international public policy tool is also a widely discussed issue. On the basis of an analysis of over one hundred cases it is clear that only in one third of cases the aim of sanctions

was achieved [Hufbauer, Schott, Elliott, 1990; Klinova, Sidorova, 2016]. Pape also showed that by no means in all cases a significant contraction of the economy was registered in the country against which sanctions had been imposed [Pape, 1997, 1998]. So, the author presumes that if a problem concerns territory, safety, welfare or the political regime of a country, the sanctions will be ineffective. Veebel and Markus [Veebel, Markus, 2015] analyzed the ostensible purposes of the EU's sanctions against Russia and Russia's retaliatory measures and came to the conclusion of a low probability of the sanctions' success due to absence of a well-defined objective and insufficient political measures.

Research on sanctions against Russia

Analyses of the consequences of sanctions against Russia are studied extensively by researchers from a wide variety of perspectives: description of the history of the development of the underlying conflicts and changes in the economy [Veebel, Markus, 2015], a study of the crisis as one of the factors that impeded the country's economic growth with respect to the forecasting of potential changes in macroeconomic indicators [Gurvich, Prilepskiy, 2015; Akidinova, Yasin, 2015], the influence on consumers [Nureev, Petrakov, 2015], and revealing the spheres of the biggest impact of sanctions [Portansky, 2014; Golikova, Kuznetsov, 2017]. All this demonstrates multidimensionality of influence exerted by sanctions on the Russian economy.

Other studies have focused on conclusions about the companies themselves. The research by Gurvich and Prilepskiy [2015] shows that by 2017 sanctions had already exerted a considerable influence on the real sector of economy and resulted in a significant capital outflow from the country and GDP decrease approximately by 6% in comparison to 2013. Fomicheva [2016] points to the fact that after imposing sanctions against Russia, credit rating agencies downgraded the country's credit rating, thus further decreasing the attractiveness of Russian companies for foreign investors. Klinova and Sidorova [2016] make an assumption that sanctions will primarily influence the high-tech and financial sectors of the economy because for them cooperation between Russia and the EU is of most importance. Golikova and Kuznetsov [2017], on the basis of a survey of employees from Russian manufacturing companies, presume that the increased integration of Russian companies into the global economy will result in more severe consequences of sanctions. Similarly, the large, successful companies carrying on business in the global market will also suffer the biggest losses. Hoffmann and Neuenkirch [2017] showed that the development of the conflict in Ukraine resulted in Russian stock market disruptions.

Among positive fallouts of sanctions the researchers point out the growth of "economic patriotism" in Russia. The influence of sanctions on agriculture is ambivalent: on the one hand, decrease of competition with foreign

companies should incentivize an imports substitution process, on the other hand, restrictions of imports of means of production may impede Russian companies trying to develop their potential to the necessary extent and to expand the capacities they need [Klinova, Sidorova, 2016].

Sanctions against Russia are a significant macroeconomic external shock and produce an integrated effect on the economy of the country. That is why it is difficult to evaluate their influence in isolation of other events and also due to rare occurrence of many macroeconomic indicators. Thus, for example, Gurvich and Prilepskiy [Gurvich, Prilepskiy, 2015] point out that the Russian economy shrinking was related to a sharp decline of oil price and Russian companies managed to adjust to conditions created by sanctions due to transfer to a floating exchange rate. All the above emphasizes the complexity of analyses dedicated to sanctions influence on the Russian economy.

Research Problem

In this research we used the event study method based upon an assumption of stock market effectiveness and helping to evaluate the influence of a certain event on the price of shares [MacKinlay, 1997; Binder, 1998]. This method may be used to analyze corporate and macroeconomic events [MacKinlay, 1997]. For example, it was used to evaluate the influence of political news on the stock market [Guidolin, Ferrara, 2010; Ghanem, Rosvall, 2014]. In our case the 'event' is the instance of a release of information on imposition of sanctions. In this regard the date of first publication of announcement precedes the actual imposition of sanctions, but investors of the stock market take into consideration the information thus changing the shares' price only if there exists grounds for change of expectations. Due to the fact that the event study method uses daily data and the response of investors is evaluated on a short-term basis, it is possible to distinguish the direct influence of sanctions from other factors.

As noted above the event study method is based upon the assumption of the stock market effectiveness. Although the Russian stock market is characterized by a relatively low liquidity and small size, the event study method has been used to analyze it in a series of papers [Teplova, 2008; Yavorskaya, 2013; Pogozheva, 2013; Naidenova, 2015; Yavorskaya, Yavorskiy, 2015; Rogova, Guseva, 2016]. Nevertheless, in order to obtain correct results, the selection considered within is comprised of the companies with the shares of the biggest liquidity.

Further, in order to carry out a more detailed analysis of the conditions which have to the largest degree influenced the companies' values, we chose the following potentially significant factors: the sanction content (the country which imposes sanctions and sanction orientation to a certain company) and company characteristics (sector of economy, size, financial independence, degree of state ownership).

Data

The announcements used for this research are related to the imposition or prolongation of sanctions against Russia (a summary of announcements is enclosed in the appendix). We chose 40 announcements on sanctions against Russia, 26 of which were imposed by USA, 12 by the European Union, and two pieces of news informing of the imposition of sanctions by EU and USA simultaneously. The data about announcements have been collected using the business resource Factiva.

In order to analyze the response of the companies' shares prices and its determinants we collected data as regards companies. The sample comprises 40 Russian companies

listed in the Moscow Stock Exchange, and their shares were included in the MICEX index as of December 17, 2013. Thus, we chose the most liquid shares. Stocks returns were collected for the period of July 1, 2013 to December 31, 2016. All information on the shares' prices was collected in the Finam web site (Finam.ru). The sample structure, as broken down by economic sector, is represented in table 1.

Data as regards the financial characteristics of companies and ownership structure were collected from the databases Ruslana and Thomson Reuters. The sample comprises 14 companies partially owned by the government, that is 33% of the total amount. The key characteristics of the companies are presented in table 2.

Table 1. Distribution of the selection companies by sectors

Sector	Number of companies	Companies
Oil and gas	8	PJSC Bashneft, PJSC Gazprom, PJSC Lukoil, PJSC Oil Company Rosneft, PJSC NOVATEK, PJSC Surgutneftgas, PJSC Tatneft, PJSC JSC Transneft
Metals and mining	8	PJSC JSC ALROSA, PJSC MMK, PJSC Novolipetsk Metallurgical Complex (NLMK), PJSC Mining and Metallurgical Company Norilsk Nickel, Polymetal International plc, United Company RUSAL plc, PJSC Severstal, PJSC Corporation VSMPO-AVISMA
Banks and finance	5	PJSC Bank VTB, PJSC Bank Saint-Petersburg, PJSC Moscow Stock Exchange, PJSC Sberbank of Russia, PJSC Joint-Stock Financial Corporation Sistema
Energy industry	4	PJSC E.ON Russia, PJSC Federal Grid Company of Unified Energy System, PJSC Inter RAO, PJSC RusHydro
Telecommunications, IT	3	PJSC Megafon, PJSC Mobile TeleSystems, PJSC Rostelecom
Construction and development	3	PJSC LSR Group, PJSC MOSTOTREST, PJSC PIK Group of Companies
Consumer goods and trade	3	PJSC DIXI Group, PJSC Magnit, PJSC M.video Company
Chemical production	2	PJSC Uralkali, PJSC PhosAgro
Transport	2	PJSC Aeroflot, PJSC Novorossiysk Commercial Sea Port
Machinery	2	PJSC KAMAZ, PJSC SOLLERS

Table 2. Characteristics of companies in the selection

Variable	Number of observations	Average value	Standard deviation	Minimum value	Maximum value
Company size	40	19.690	1.300	16.867	22.058
Financial leverage	40	1.402	2.591	-11.558	13.728
Daily stock returns	34,946	0.001	0.022	-0.461	0.724

Methodology

As was already mentioned, the research is based upon the event study methodology. At the first stage we define the abnormal return, i.e. deviation of return from the expected value which is attributed to the event – release of information on imposition of sanctions. At the second stage we define the determinants of the abnormal return.

The abnormal return is calculated as follows:

$$AR_{ijt} = R_{it} - \widehat{R}_{ijt}, \quad (1)$$

where AR_{ijt} is abnormal return on a share i for announcement j for day t ; R_{it} – actual return on a share i for day t ; \widehat{R}_{ijt} – normal return on a share i for announcement j for day t .

The normal return may be estimated on the basis of various models: constant mean return model, market model, economic models such as CAPM and APT [MacKinlay, 1997; Binder, 1998]. The market model is the most widespread in empirical studies. The market model relates the return of a given security to the return of the market portfolio. Then, based on estimated parameters and the actual return of market portfolio for event day, the normal return is calculated, i.e. the stock return at the date of the event as if the event has not occurred. The equation of normal return is as follows:

$$\widehat{R}_{ijt} = \alpha_{ij} + \beta_{ij} \times R_{mt}, \quad (2)$$

where α_{ij} and β_{ij} are the parameters of the market model; R_{mt} – the return on market portfolio for day t .

In order to take into consideration all the information available to the market to predict the normal return the most relevant stock market index is used. MICEX index is the most relevant index for analysis of shares on the Russian stock market. However, in case of bad macroeconomic events such as imposition of sanctions the whole stock market of the country is sinking. Moreover, the change of sensitivity of company return to systematic risk is possible. Therefore, the market model most probably provides an underestimated absolute value of abnormal return evaluating the drop in the company stock returns against the market downfall in general. Apart from that, the Russian stock market has a small amount of liquid assets and a high concentration of capitalization and its index can be influenced by changes in the share price of large issuers such as Gazprom, Lukoil or Sberbank. Therefore, we used the global index MSCI World as an alternative benchmark. Additionally, we evaluated the abnormal return on the basis of the constant mean return model as follows:

$$\overline{R}_i = \frac{1}{T} \sum_{t=-200}^{-30} R_{it}, \quad (3)$$

where \overline{R}_i is the mean return on a security i ; T is the number of trading days within the estimation window to estimate the normal return model.

The constant mean return model is simple and has low predictive power. However abnormal return calculated using mean return model is not influenced by the change

of shares' price when an event occurs and new information for the market is released.

In previous studies the estimation window was chosen rather arbitrarily and varies from 100 to 360 days [Konchitchki, O'Leary, 2011]. For this research we chose an average estimation window of 170 days. In order to prevent the influence of preliminary discussions of possible imposition of sanctions we left an interval of 30 days between the period for estimation of the normal return model and the event date. So, if the date of publishing the announcement about a sanction is denoted as $[0]$, the period of evaluation of the normal return model is $[-200; -30]$.

Inasmuch as imposition of sanctions had been discussed previously and that information could have influenced the shares' prices before the official announcement was released, and inasmuch as taking into account of that information by the stock market could take more than one day, we calculated additionally the cumulative abnormal return indicators for three $[-1;1]$ and five $[-2;2]$ days.

The cumulative abnormal return for each announcement was calculated as follows:

$$CAR_{ijt} = \sum_{t=t1}^{t2} AR_{ijt}, \quad (4)$$

where CAR_{ijt} is the cumulative abnormal return on a share i for announcement j ; $t1$ and $t2$ denote the beginning and end of the event window respectively.

The cumulative average abnormal return shows what was the response to the news on average by the companies:

$$CAAR_{t1;t2} = \sum_{t1}^{t2} AAR_t, \quad (5)$$

$$\text{where } AAR_t = \frac{\sum_{i=1}^N AR_{ijt}}{N}$$

is an average abnormal return on day t ; N is the number of related announcements for the company i .

Further, in order to reveal determinants of abnormal return the following model has been tested:

$$CAR_{ijt} = \beta_0 + \beta_1 \times \text{sanct_list}_{ij} + \beta_2 \times USA_j + \beta_3 \times EU_USA_j + \beta_4 \times gov_i + \beta_5 \times raw_i + \beta_6 \times size_{it} + \beta_7 \times leverage_{it} + year_t + \varepsilon_{ijt}, \quad (6)$$

where sanct_list_{ij} is a dummy variable which is equal to one if a sanction j is targeted against the company i and zero otherwise. USA_j , EU_USA_j are dummy variables for the countries which impose sanctions – USA and simultaneously USA and the European Union correspondingly; gov_i is a dummy variable which indicates whether state own company's shares. Apart from that, we control for the company features: $size_{it}$ is the company size measured as the natural logarithm of the company market capitalization and $leverage_{it}$ is the financial leverage of a company at the end of the previous year. We also allow response of shares' prices to differ due to various

macroeconomic conditions, accumulation of influence of sanctions on the country economy, retaliation measures and correction of macroeconomic policy. Therefore, we include year effects to the model. ε_{ijt} is the error term, β – the parameters of the model. Indexes i , j and t denote a company, sanctions announcement and time period correspondingly.

Results

Tables 3–5 show the results of analysis of the average abnormal returns on the basis of eventstudy2 module [Kaspereit, 2016] for statistics package STATA. In case of the market model based on MICEX index (table 3), all tests show a significant positive abnormal return of about 2% at the second day after the announcement. It means that on average the shares of the companies represented in the sample do not fall as much as the market in whole. Models based on constant mean return and market

model estimated using a MSCI World index produce similar results. It is clear from table 4 and 5 that parametric tests (Patell test [Patell, 1976], Boehmer test [Boehmer, Masumeci, Poulsen, 1991], Kolari test [Kolari, Pynnönen, 2010]) show significance almost at all days of the event window while non-parametric tests (Corrado test [Corrado, 1989], Corrado and Zivney test [Corrado, Zivney, 1992], Cowan test [Cowan, 1992]) show a significant negative response only a day before the announcement release. It may be explained by the fact that distribution of abnormal return is close to a normal but leptokurtic, therefore the results of non-parametric tests are more reliable. Existence of response before the announcement release may be explained by the release of information on the planned discussion of sanctions. Consequently, the investors of the Russian stock market estimated the possibility of imposition of sanctions as high enough at the stage of discussion of their potential imposition already.

Table 3. Significance of the average abnormal returns estimated on the basis of the market model with MICEX index

<i>t</i>	AAR	<i>t-test</i>	Patell	Boehmer	Kolari	Corrado	Zivney	GenSign
–2	0.0005							*
–1	–0.0007		**					
0	0.0003					*	*	**
1	0.0001							
2	0.0021	***	***	***	***	***	***	***

Note: significant at: * – 10%; ** – 5%; *** – 1%.

Table 4. Significance of the average abnormal returns estimated on the basis of the market model with MSCI World index

<i>t</i>	AAR	<i>t-test</i>	Patell	Boehmer	Kolari	Corrado	Zivney	GenSign
–2	–0.0018	***	***	***				*
–1	–0.0053	***	***	***	*	*		***
0	–0.0020	***	***	***				
1	0.0028	***	***	***		*		***
2	0.0016	***	***	***				**

Note: significant at: * – 10%; ** – 5%; *** – 1%.

Table 5. Significance of the average abnormal return estimated on the basis of the constant mean return model

<i>t</i>	AAR	<i>t-test</i>	Patell	Boehmer	Kolari	Corrado	Zivney	GenSign
–2	–0.0009		**	*				
–1	–0.0062	***	***	***	**	*	*	***
0	–0.0024	***	***	***				
1	0.0027	***	***	***				***
2	0.0010	*	***	**				

Note: significant at: * – 10%; ** – 5%; *** – 1%.

Table 6. Significance of cumulative average abnormal return estimated on the basis of the market model with MICEX index

<i>t</i>	CAAR	<i>t</i> -test	Corrado_Cowan	Zivney_Cowan	GenSign
[-1;1]	-0.0002		*	*	*
[-2;2]	0.0024	**	***	***	***

Note: significant at: * – 10%; ** – 5%; *** – 1%.

Table 7. Significance of cumulative average abnormal return estimated on the basis of the market model with MSCI World index

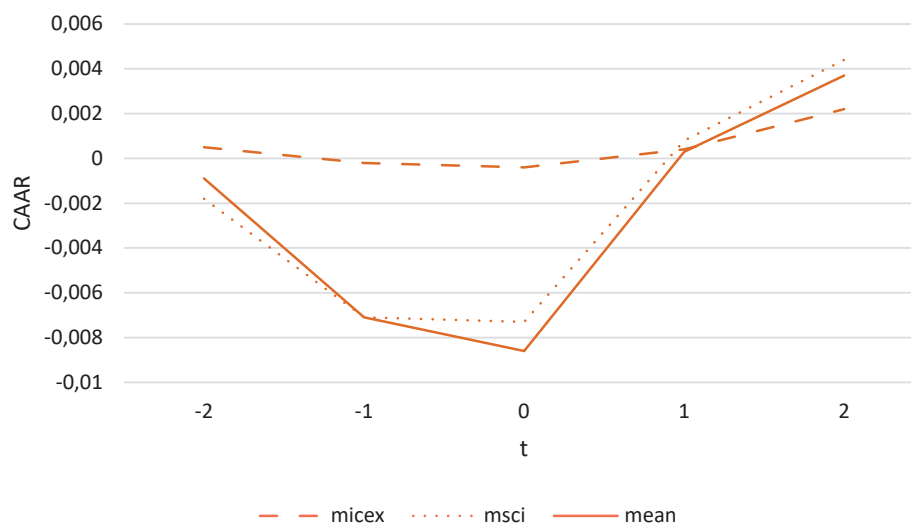
<i>t</i>	CAAR	<i>t</i> -test	Patell	Boehmer	Kolari	GenSign
[-1;1]	-0.0036	***	***	***		*
[-2;2]	-0.0045	***	***	***		

Note: significant at: * – 10%; ** – 5%; *** – 1%.

Table 8. Significance of cumulative average abnormal return estimated on the basis of the constant mean return model

<i>t</i>	CAAR	<i>t</i> -test	Patell	Boehmer	Kolari	GenSign
[-1;1]	-0.0059	***	***	***	**	***
[-2;2]	-0.0059	***	***	***		

Note: significant at: * – 10%; ** – 5%; *** – 1%.

Figure 1. The cumulative average abnormal return calculated on the basis of the market model with the MICEX index (micex), market model with the MSCI World index (msci) and the constant mean return model (mean)

The cumulative average abnormal return for the market model (table 6) in the interval of [-1;1] is negative while analyzing a wider window the tests show a significant positive response. Such multidirectionality may be indicative of an increase in the shares' price volatility or of the shares' price reverse reaction after the fall at the day of releasing information on imposition of sanctions.

An analysis of the cumulative average abnormal return for the market model on the basis of a global index and constant mean return model shows a significant negative response at a three-days' event window [-1;1], however at

a wider, five-days' event window [-2;2] non-parametric tests show that on average the response was undistinguishable from zero (tables 7-8). This may be explained by heterogeneity of companies as well as by a reverse reaction of prices on the second day after the announcement release.

Fig. 1 shows the dynamics of the cumulative average abnormal return for each of the three analyzed models. The graphical analysis confirms the assumption that use of the model on the basis of a local stock market index results in underestimation of the response of the shares' price to the event.

Further, we conducted a regression analysis to reveal dependence of the shares' prices response to the features of the sanction and company. In order to check the robustness of the results, we used abnormal returns as the dependent variable for each of three normal returns models. Apart from that, for each dependent variable we tested two models: 1) model with company fixed individual effects; 2) model with industry fixed effects. The results of estimation of the regression models are presented in table 9. In general, one should point out the robustness of the results with respect to the key determinants of the shares' prices reaction. The constant term is not statistically significant, but it may be related to homogeneity within the sample. As far as sanctioner country is concerned, the strongest shares' price reaction was

observed to be related to those sanctions imposed by USA. At the same time, joint sanctions imposed by the USA and EU produced a smaller negative effect than those that were imposed individually by the USA or EU. The results also show that the strength of investors' reaction to imposition of sanctions depended on the company characteristics. Thus, shares of the companies with a higher financial leverage lost ground much more than others. With increase of the financial leverage by one standard deviation the average daily abnormal return within the period of sanction announcement is reduced by 0.5% points. Industry effects turned out to be individually insignificant. As for the individual effects of companies, on average the least sensitivity to imposition of sanctions was shown by such companies as Sberbank, VTB, Dixi Group and MTS.

Table 9. Analysis of determinants of cumulative abnormal return CAR [-1;1]

	(1)	(2)	(3)	(4)	(5)	(6)
	CAR micex	CAR micex	CAR msci	CAR msci	CAR mean	CAR mean
Sanction targeted against a company	-0.004 (0.004)	-0.003 (0.004)	-0.006 (0.007)	-0.003 (0.007)	-0.003 (0.008)	-0.001 (0.008)
Sanctions imposed by USA	-0.005** (0.002)	-0.005** (0.002)	-0.008*** (0.003)	-0.008*** (0.003)	-0.009*** (0.003)	-0.009*** (0.003)
Sanctions imposed by EU and USA simultaneously	0.002 (0.003)	0.002 (0.004)	0.010** (0.004)	0.010** (0.004)	0.009** (0.004)	0.009** (0.004)
Financial leverage	-0.002*** (0.001)	-0.001* (0.001)	-0.002** (0.001)	-0.001 (0.001)	-0.003*** (0.001)	-0.001 (0.001)
Company size		0.000 (0.001)		0.000 (0.002)		0.000 (0.002)
State ownership		-0.000 (0.003)		-0.000 (0.004)		0.001 (0.004)
2015 year effect	0.001 (0.002)	0.001 (0.002)	0.001 (0.003)	0.000 (0.003)	0.000 (0.003)	0.000 (0.003)
2016 year effect	0.000 (0.002)	-0.000 (0.002)	0.011*** (0.003)	0.010*** (0.003)	0.011*** (0.003)	0.010*** (0.003)
Company effects	Included		Included		Included	
Industry effects		Included		Included		Included
Constant	-0.006 (0.010)	0.004 (0.027)	-0.016 (0.013)	-0.003 (0.034)	-0.019 (0.012)	-0.007 (0.033)
Number of observations	1,565	1,565	1,485	1,485	1,565	1,565
R-squared	0.025	0.007	0.025	0.011	0.026	0.013

Note: significant at: * – 10%; ** – 5%; *** – 1%. Bootstrap standard errors in parentheses.

Among companies' features that can drive stock market reaction to the announcements related to sanctions, the significant influence of a company's financial leverage was confirmed. However, the model reveals significance of distinguished features of sanctions content as well. An interesting result is a stronger negative investors' reaction to sanctions imposed by USA in comparison to EU sanctions and effect of joint USA and EU sanctions in spite of a large volume of external turnover of Russia with EU countries. As for the period of sanctions in 2016 the investors' negative reaction to prolongation of sanctions turned out to be weaker in comparison to the sanctions imposed in 2014 and 2015. Apart from that, we could not confirm a stronger effect of targeted sanctions in comparison to general sanctions. The relevant effect, as categorized according to industry sector and state ownership turned out to be insignificant.

Conclusions

Within this research study we analyzed the way Russian stock market investors responded to announcements related to imposition and prolongation of sanctions against Russia because of the conflict with Ukraine. Using the event study method we estimated the influence of sanctions on public companies which shares are included in the MICEX index.

The results showed that the announcements about imposition of sanctions against Russia, on average, negatively influences the Russian companies' shares' prices. This result is in line with the theoretical assumptions behind sanctions and the results of previous empirical studies, for example, by Hoffmann and Neuenkirch [2017]. However, a range of other hypotheses were not confirmed. First, it was found that investors reacted negatively to sanctions imposed by the USA to a greater extent in comparison to the European Union sanctions. This contradicts the assumptions of a stronger influence of sanctions imposed by the countries with which more close trade and economic relations had been established [Jing, Kaempfer, Lowenberg, 2003; Pape, 1997]. But this result may be caused by the fact that the USA initiated the imposition of sanctions. It may be the case that their sanctions preceded sanctions of other countries, and for this reason this turned out to be unexpected news of a more negative import for Russian investors. Also, the assumption of previous studies that sanctions should do a lasting damage to large companies which are more involved in international trade [Golikova, Kuznetsov, 2017] was not confirmed. Probably, such a result is caused by the fact that large companies have more financial resources and opportunities for diversification, thus making it possible for them to reorient to the domestic market. Inasmuch as a series of sanctions targeted the financial sector then it was expected that financially dependent companies were exposed to influence of sanctions to a greater extent.

Although this research does not unambiguously answer the question as to which companies will suffer more

losses from sanctions imposed against Russia in the long term and which ones will be able to avail of the opportunity for growth due to the decrease in competition, it does show how stock market investors evaluate such prospects. In future it may be possible to conduct an analysis using a longer time interval as well as to study the process of import substitution in Russian enterprises using data of particular companies. Apart from that, further analysis of the sanctions impact may be conducted with reference to retaliatory measures of Russia and government actions for support of domestic companies. Also, the analysis revealed a series of methodological issues of event study for the analysis of macroeconomic events that influence the country's economy and the stock market in general.

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Appendix

List of Announcements about Sanctions

March 1, 2014 – John Kerry threatened Russia with sanctions.

March 4, 2014 – the US Congress develops a draft law on sanctions against Russia, military and investment cooperation is suspended.

March 13, 2014 – USA will impose sanctions on Russia if a referendum in Crimea takes place.

March 16, 2014 – imposition of sanctions against a series of Russian officials (freezing of bank accounts, arrest of property, visa denials).

March 17, 2014 – imposition of sanctions against 21 politicians and officials (ban on entry to the EU, freezing of money and economic resources).

March 20, 2014 – the list of individual persons against whom sanctions are imposed is extended; sanctions are imposed on the bank named 'Rossiya'.

March 21, 2014 – the list of individual persons against whom sanctions are imposed is extended.

March 27, 2014 – suspension of cooperation with Russia, suspension of export of "potentially unsafe products".

April 2, 2014 – suspension of cooperation with Russia (law-enforcement agencies, antiballistic missile defense, space sphere).

April 7, 2014 – access to facilities of the Ministry of Energy is restricted.

April 17, 2014 – EU urges to elect not to build the gas pipeline project named 'South Stream'.

April 28, 2014 – the list of individual persons and companies against which sanctions are imposed is extended; USA declares a prohibition on sale of high-technology goods into Russia.

May 7, 2014 – removal of Russia from the trading program of duty-free import of certain types of goods into USA.

May 12, 2014 – the list of persons against whom sanctions are imposed is extended; sanctions are imposed on Chernomorneftegaz and Feodosiya.

June 18, 2014 – the list of companies against which sanctions are imposed is extended (Fryazino Branch of the Institute of Radio Engineering and Electronics of the Russian Academy of Sciences, OJSC Voyentelecom, Academy of Business Security, Ampika Pumps LLC, Nuklin LLC).

June 21, 2014 – the list of persons against whom sanctions are imposed is extended.

July 12, 2014 – the list of persons against whom sanctions are imposed is extended.

July 16, 2014 – the list of individual persons and companies against which sanctions are imposed is extended (Rosneft, Novatek, Vnesheconombank, Gazprombank, Almaz-Antey Corporation, Izhmash of Kalashnikov Concern, JSC Research and Production Association Bazalt, Uralvagonzavod and Instrument Design Bureau, NPO Mashinostroyeniya, Radio-Electronic Technologies Concern, Sozvezdiye, Fedodosiya Neftebaza).

July 25, 2014 – refusal to support projects of the World Bank in Russia.

July 26, 2014 – extension of the sanctions list for 15 persons and 18 organizations.

July 29, 2014 – the list of companies against which sanctions are imposed is extended (Bank of Moscow, Bank VTB and Rosselkhozbank; United Shipbuilding Corporation).

July 31, 2014 – EU extends the list of companies against which sanctions are imposed (Sberbank of Russia, Bank VTB, Gazprombank, Vnesheconombank, Rosselkhozbank); ban on providing Russia with high-technology equipment for oil extraction in the Arctic Region, at the deep marine shelf and light tight oil.

August 6, 2014 – ban on providing equipment for deep-sea extraction, exploitation of the Arctic shelf and shale oil and gas reserves, on providing unconventional energy carriers extraction technologies: drilling rigs, horizontal directional drilling parts, subsea equipment, sea equipment for operation in the Arctic Region, software for formation hydraulic fracturing, remotely operated underwater vehicles, high-pressure pumps.

September 12, 2014 – the list of companies against which sanctions are imposed is extended (Gazprom, Lukoil, Transneft, Gazprom Neft, Surgutneftegas, Novatek, Rosneft, Sberbank, Bank of Moscow, Gazprombank, Rosselkhozbank, Vnesheconombank, Bank VTB, Rostekh, Concern Military and Political Research Center Almaz-Antey, PJSC Dolgoprudny Research and Development Enterprise, PJSC M.I.Kalinin Machine-Building Plant, PJSC Mytishchi Machine-Building Plant, PJSC V.V. Tikhomirov Scientific Research Institute of Instrument Design).

September 25, 2014 – the Overseas Private Investment Corporation suspends consideration of any investments in Russian projects.

December 19, 2014 – imposition of economic sanctions against Crimea; the list of Russian individual persons against whom sanctions are imposed is extended.

March 4, 2015 – prolongation of restrictive measures against Russia for a year.

March 11, 2015 – the list of Russian individual persons against whom sanctions are imposed is extended.

March 13, 2015 – EU prolongs sanctions against individual persons and legal entities.

June 22, 2015 – EU prolongs sanctions against Russia.

June 24, 2015 – From now on USA may punish foreign banks for cooperation with clients listed in the sanctions list.

July 30, 2015 – the list of individual persons and organizations against which sanctions are imposed is extended.

August 7, 2015 – sanctions are imposed against Yuzhno-Kirinskoe Field of Sakhalin-3 Project of Gazprom Company.

December 21, 2015 – EU prolongs sanctions against Russia.

December 22, 2015 – the list of individual persons and organizations against which sanctions are imposed is extended.

March 2, 2016 – sanctions against Russia are prolonged for a year.

March 10, 2016 – EU prolongs sanctions against legal entities and individual persons.

September 1, 2016 – the list of individual persons and organizations against which sanctions are imposed is extended.

September 6, 2016 – the list of companies against which sanctions are imposed is extended.

September 16, 2016 – EU prolongs individual sanctions against Russia.

Capital Structure Management by Share Repurchase for Companies in Emerging Markets

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Abstract

According to foreign research into developed markets, share repurchasing influences the speed of adjustment of companies' capital structure to the target level. It is worth noting that the number of such research studies for emerging markets is rather small.

On the basis of an empirical study of a selection of 275 companies from BRICS countries involved in share repurchase for the period of 2005 to 2015 we prove here that share repurchase is an efficient method of correcting an existing capital structure, aligning it to approximate a target level in all BRICS countries. It should be noted that in accordance with our results, companies from Brazil and Russia show the highest speed of adjustment (within 63–80%). This indicates that these companies are able to achieve the target structure within a very short period. Companies from the other countries (India, China, and South Africa) also show a rather high rate of the speed of adjustment (in the range of 44 to 49%).

It is worth noting that apart from the share repurchase itself, characteristic features of the companies (as well as special characteristics of local economic factors where they are relevant) influence the speed of adjustment to the target capital structure. We also found out that the most significant factors which have positive effects on the speed of adjustment are the company size, its growth prospects, share of repurchased shares, economic growth rate, inflation rate in the country which adversely affect to a great extent the speed of adjustment to the target capital structure. For Russian companies the most significant determinants are the company size, share of repurchased shares and inflation rate.

An assessment of the speed of adjustment to the target capital structure of companies repurchasing shares showed that for Russian companies (for a balance sheet leverage) and for South African companies (for a market financial leverage) the speed of adjustment is not significant, however in general the countries selection and each sub-selection shows that BRICS countries' companies are prone to adjust to the target capital structure quicker when the financial leverage is lower than the target value, while companies with an excess debt load optimize much slower.

On the basis of the research results we offer an algorithm pertaining to capital structure management for the companies acting in emerging markets using share repurchase in an open market.

Keywords: capital structure; capital structure determinants; partial adjustment model; share repurchase; speed of adjustment; target capital structure.

JEL: G35, G32

Introduction

The problem of management of the capital structure is studied extensively in literature commencing from publishing in 1958 the paper by Modigliani–Miller (MM). It is common knowledge that this theory is true for a perfect capital market, so over the past few decades scientists tried to introduce in the ideal MM world the “imperfections” inherent in the actual market, and this gave rise to dozens of theories on the structure of companies’ capital. Notably, a compromise theory gained traction which is based upon the presumption that a company has a target capital structure. At the close of the twentieth century a great number of works (mainly in foreign literature) was dedicated to the study of the influence of the share repurchase procedure on the current companies’ capital structure. Papers by [Bonaime et al., 2014; Wang et al., 2009; Koerniadi et al., 2007] revealed that in mature markets, companies shorten the distance to the target structure by share repurchase, and the difference between the target capital structure and the capital structure after repurchase in such companies is less than in similar companies which have not repurchased shares. Share repurchase is, therefore, an effective corporate management tool because it can influence significantly the company market value, its shares’ price, ownership structure and its financial leverage. Advanced economies started to use the share repurchase procedure since the 1990s and each year the volume of transactions grows. According to Thomson Reuters, in 2016 S&P 500 companies repurchased shares whose value amounted to 536 billion dollars. Along with this, the average annual rate of growth of the amount of repurchased shares in the period of 2000 to 2016 was approximately 9%¹.

In the meantime, in Russia, share repurchase by an issuer is a rather new and not entirely studied phenomenon. At the same time a lot of public companies in emerging markets (including Russia) repurchase shares and implement programs of share repurchase. Alongside this, there exists a rather small amount of research which reveals the influence of repurchase on companies’ capital structure in emerging markets. Besides, little attention is devoted to revealing the influence of individual characteristic features of companies and macroeconomic performance of emerging markets on the speed of adjustment to the target capital structure as a result of share repurchase. Meanwhile, it behoves companies to fully understand the consequences of share repurchase (among other reasons for the sake of their shareholders’ welfare), and take into consideration the economic status of the company itself and the features of the prevailing macroeconomic environment (for example, economic growth dynamics, inflation etc.). All the above reasons are motivating factors for the authors’ interest to research in this sphere.

The first part of this publication analyses the mechanism of influence of the share repurchase procedure on the

capital structure of companies and on the speed of adjustment to the target capital structure and substantiates the hypotheses of the study. The second part gives grounds for development of the model necessary for the research of influence of the share repurchase on attainment by the companies of the target capital structure. The third part states the justification for generating a specific selection of companies in BRICS countries and descriptive statistics of the selection. The fourth part is devoted to an analysis of the results of an empirical study aimed at revealing the nature of influence of the share repurchase procedure on the speed of adjustment of companies from developing economies to the target capital structure, as well as to identifying the most significant factors at play for various types of companies engaged in this activity. In this part, we also draw forth the differences in the speed of adjustment to the target capital structure of the companies in BRICS countries. Finally, in the fifth part of this paper, on the basis of study results, the authors describe the algorithm of management of the target capital structure using share repurchase for various types of companies taking into consideration the macroeconomic environment, which has been developed by them.

1. Analysis of Literature and Substantiation of the Research Hypotheses

In modern economic theory, the *capital structure* is understood as the ratio of debt capital to proprietary capital chosen by a company in accordance with its development strategy aimed at the solution of long-term tasks. As a rule, among the *proprietary funds* of a company are included its shares (ordinary and preferred ones), and many researchers include with *borrowed funds* mainly the company long-term debt. When studying the capital structure it is necessary to make explicit the difference between the *notions of the target and optimal structure*. The *optimal capital structure* is understood as a correlation of the debt and the company owned capital which maximizes the company value. However, as a matter of practice it is extremely difficult to evaluate such correlation as long as it is more frequent in the theories of the capital structure which reveal the optimal value on the basis of including a limited number of factors. For this reason, in the management of a company the *capital structure target value* is used, which is formed under the influence of internal and external factors, life cycle stages and which gives the company an opportunity to increase its value and to be in good progress.

Division into *static and dynamic theories* occurs in the literature dedicated to analysis of the capital structure most often. At the same time dynamic compromise models of the capital structure which give an opportunity not merely to study methods of attaining the target capital structure, but also to assess the speed of adjustment to it are developed rather rapidly. The compromise theory is based

¹ Stock Market Indicators: S&P 500 Buybacks & Dividends // Yardeni Research. – 2017.

on the presumption that the company has a target capital structure which is chosen having regard to the balance between the marginal benefit of attracting debt financing and the possible marginal costs incurred by failure to fulfill obligations of debt servicing. Since the period of development of the compromise theory, a growing number of research papers has been dedicated to research into the costs of adjustment and the speed of adjustment of firms to the target capital structure.

The most commonly used model for evaluation of the speed of adjustment of the company capital structure to the target value is the partial adjustment model. The **standard (single-stage) partial adjustment model** is governed by the following equation:

$$LEV_{j,t} - LEV_{j,t-1} = \lambda_j (LEV_{j,t}^* - LEV_{j,t-1}) + \varepsilon_{j,t}, \quad (1)$$

where $LEV_{j,t}$ is the indicator of the capital structure of the j-th company in the point of time t, $LEV_{j,t}^*$ - indicator of the target capital structure of the j-th company in the point of time t, λ_j - speed of adjustment of the j-th company.

Speed of adjustment indicates how much the distance between the current capital structure of the company and its target value is reduced: the larger the indicator λ value, the quicker the company acquires the target capital structure. If $\lambda < 0$ the actual capital structure deviates even more from the target value within a given period. If $\lambda = 0$ then within a given period the company capital structure has not approximated the target value. If $0 < \lambda < 1$ then the company capital structure gradually shortens the distance between the actual and target value.

This formula describes the process of change of the financial leverage where in each period the company financial leverage $LEV_{j,t}$ adjusts to the target value $LEV_{j,t}^*$ at the speed of λ . At the same time the leverage target value is an unobservable variable, however this target value is defined by a set of determinants X .

$$LEV_{j,t}^* = \alpha_i + \sum \beta_i X_{j,t} + \varepsilon_{j,t}, \quad (2)$$

where $X_{j,t}$ is the vector of determinants of the target capital structure.

Thus, the unobservable target value of the leverage in equation (1) may be defined using the determinants of the target capital structure by substituting for equation (2) in equation (1), in this case rearrangement of summands results in distinguishing the speed of adjustment to the target capital structure λ :

$$LEV_{j,t} = (1 - \lambda_j)LEV_{j,t-1} + \lambda_j \alpha_i + \lambda_j \sum \beta_i X_{j,t} + \varepsilon_{j,t}, \quad (3)$$

where $LEV_{j,t}$ is the indicator of the capital structure of the j-th company in the point of time t; $X_{j,t}$ is the vector of determinants of the target capital structure; λ is the speed of adjustment.

The main drawback of the single-stage partial adjustment model is that the model assumes that the speed of

adjustment to the target capital structure is homogeneous, i.e. it is identical for all considered companies. This fact prevents us from evaluating the influence of certain determinants, in particular share repurchase and its characteristics, on the speed of adjustment to the target capital structure. In this regard a necessity for using a two-stage evaluation method arises.

In accordance with the **two-stage partial adjustment model** at the first stage the target value of the financial

leverage $LEV_{j,t}^*$ for each company is calculated using the values of coefficients and values of determinants of the target capital structure in consequence of evaluating equation (2). On the basis of the calculated values the value of deviation of the financial leverage from the target value is calculated:

$$\widehat{Dev}_{j,t} = \widehat{LEV}_{j,t}^* - LEV_{j,t-1}, \quad (4)$$

where $\widehat{LEV}_{j,t}^*$ is the indicator of the target capital structure of the j-th company in the point of time t, $LEV_{j,t-1}$ is the indicator of the capital structure of the j-th company in the point of time t-1.

When substituting the value of deviation from the target leverage (4) into equation (1) we get the final model specification:

$$LEV_{j,t} - LEV_{j,t-1} = \lambda_j \widehat{Dev}_{j,t} + \varepsilon_{j,t}. \quad (5)$$

Evaluation of the model specification represented by equation (5) gives an opportunity to assess the influence of various determinants on the speed of adjustment of the company to the target capital structure and, among other things, to take into consideration the influence of share repurchase.

In order to evaluate the speed of adjustment of companies to the target value of debt taking into consideration their original position relative to the target value the paper by [Dang et al., 2012] offered a **mode switching partial adjustment model**. This model gives the authors the opportunity to find out what the difference is between the speed of adjustment in the companies with the capital structure above and below the target value:

$$LEV_{j,t} - LEV_{j,t-1} = \lambda_1 (LEV_{j,t}^* - LEV_{j,t-1}) 1_{(q_{it} \leq c)} + \lambda_2 (LEV_{j,t}^* - LEV_{j,t-1}) 1_{(q_{it} > c)} + \varepsilon_{j,t}, \quad (6)$$

where $1_{(q_{it} \leq c)}$ is the indicator of the capital structure below the target value; λ_1 is the speed of adjustment for the companies with the capital structure below the target value; $1_{(q_{it} > c)}$ is the indicator of the capital structure above the target value; λ_2 is the speed of adjustment for the companies with an excessive debt load².

Another method of evaluation of the speed of adjustment to the target capital structure was proposed in the paper

² For the companies which capital structure is above the target value.

by [Komera, Lukose, 2016]. The specific characteristic of this method consists in its taking into account the fact that the model dependent variable, that is the capital structure is a fractional value (share of borrowed funds in the company assets), therefore this method is called **DPF (dynamic panel fractional estimator)**. Besides, this method is intended for evaluation of unbalanced dynamic panel data, and this is its compelling advantage. The DPF method is based on the partial adjustment model similar to equation (3) above. The main difference from model (3) lies in defining the values of the financial leverage variable: in order to take into account the fractional nature of the capital structure value an unobservable (latent) variable which is time-invariant, defined on the basis of evaluating equation (7) is used as a dependent variable.

$$LEV_{jt}^+ = \lambda_j LEV_{j,t-1} + \alpha_i \sum \beta_i X_{j,t} + \varepsilon_{jt} \cdot (7)$$

Variable LEV_{jt}^+ is some kind of theoretical estimate and may be beyond the interval of zero to one. At the same time, in effect, the value of the financial leverage is usually limited to the assigned limits and may fail to comply with this restriction only in extreme cases. In view of this the values of the observed value of the leverage are subject to the following limitation:

$$LEV_{j,t} = \begin{cases} 0, LEV_{jt}^+ \leq 0, \\ LEV_{jt}^+, 0 < LEV_{jt}^+ < 1, \\ 1, LEV_{jt}^+ \geq 1. \end{cases} \quad (8)$$

The obtained observable dependent variable is doubly censored (limited) within the interval from zero to one. However, the evaluations obtained by this method are not always well-balanced. For example the paper by [Komera, Lukose, 2016] tested this method in emerging markets for the companies listed at Johannesburg Stock Exchange in the period of 2000 to 2010. The obtained evaluation of the speed of adjustment for the financial leverage using the generalized method of moments (GMM) by Blundell-Bond amounted to 54%, however the speed of adjustment using the DPF method amounted to 80%. Consequently, the evaluations of the speed of adjustment of the capital structure in an emerging market using this method may be overestimated significantly.

Thus, from now forth we will use the two-stage partial adjustment model and the mode switching partial adjustment model to evaluate the influence of the direction of deviation from the target capital structure on the speed of adjustment to it when repurchasing shares.

At this point, we shall seek to substantiate the hypotheses of the research concerning influence of share repurchase on the companies' speed of adjustment to the target capital structure.

Capital structure theories forecast how and why a firm may make profit on share repurchase. In accordance with the signal model, the company management by share repur-

chase gives to the market a positive signal (the repurchase signals of the company's large cash flows, of expected rise in incomes) which attracts investors and initiates growth of shares. It should be noted that many companies use this advantage and declare share repurchase in an open market (in order to initiate growth of the company shares) but never actually implement such repurchases. Nevertheless, declared and uncompleted repurchases may adversely affect the price of the company shares as well as its goodwill. In accordance with the compromise theory, companies with a capital structure below the target value may attain such value by share repurchase: share repurchase reduces the owned capital increasing the leverage ratio; if repurchase was implemented by attracting debt capital, the leverage grows still more.

[Dittmar, 2000] was among the first to use a selection of nonfinancial companies in the period of 1977 to 1996 from CRSP³ database to show that companies which have repurchased shares shorten the distance to the target structure (defined as median ratio of debt to assets in the industry) and such companies have a smaller difference between the target capital structure and the capital structure after repurchase than the companies which have not implemented repurchase. The research by [Bonaime et al., 2014] which involved 7,880 repurchases in an open market in the United States between 1990–2010 also proved the significance of the inducement for correcting the capital structure: the market response to share repurchase is stronger in correlation with how much more the company capital structure deviates from the target value before the repurchase.

However, the amount of research into the issue concerning the influence of share repurchase on attainment of the target capital structure in emerging markets (and specifically in the Russian market) is significantly smaller. Mainly, analysis of the influence of industry affiliation, macroeconomic and institutional factors on the speed of adjustment to the target capital structure of companies in emerging markets, in particular in BRICS countries, is made in the researches. At present the Russian literature offers virtually no researches dedicated to the influence of share repurchase on the speed of adjustment to the target value of debt load, provides no recommendations on management decisions as regards correcting the capital structure using share repurchase, thus bringing about the present research. Alongside this (taking into consideration the proven influence of share repurchases on the attainment by companies of the target value of debt load in mature markets) we will verify this dependency for emerging economies of BRICS countries. In this regard the first hypothesis of our research is enunciated as follows: *Hypothesis 1: as a result of share repurchase the capital structure adjusts approximating the target value.*

The amount and proportion of repurchased shares also influence significantly the capital structure of companies.

³ The Center for Research in Security Prices.

According to research into mature markets made by [Bargeron et al., 2011], [Bonaime, 2012] small repurchases are considered by investors as means of attaining a more efficient capital allocation, as in those cases the market response is minimal and fluctuations in prices for shares are of small account. However the higher the amount of repurchased shares, the stronger the market's positive response, and accordingly the more significant correction of company capital structure results (as long as a greater reduction in company-owned capital takes place) [Bargeron et al., 2011]. [Chun, 2010] studied share repurchase programs in Germany, Italy, Great Britain and France in the period of 1990 to 2005 and reached the conclusion that the bigger the amount of repurchased shares is, the more the distance to the target capital structure shortens: a big amount of shares repurchased at any one time results in significant reduction of company-owned capital, thus increasing the financial leverage and the company will correct the capital structure quicker thus approximating it to the target value. As long as share repurchases in the Russian market differ in amount it is important for us to study the dependence of the speed of adjustment on the amount of repurchased shares. This conformity to principle has not been studied in the Russian market but we can assume existence of a similar dependence revealed in mature markets and test it. *Hypothesis 2: the more the amount of repurchased shares is, the higher the speed of adjustment to the target capital structure achieved as a result of share repurchase.*

A significant influence on the speed of adjustment is correlated with the *distance and direction of deviation from the target capital structure*. On the one hand, in accordance with the compromise theory the farther the company position is from the target capital structure, the bigger the alternative costs of deviation from it, and consequently, the speed of adjustment should be higher [Aybar-Arias et al., 2012]. On the other hand, if deviation from the target value of the financial leverage is significant and costs of adjustment are too high the company may elect not to correct the capital structure [Lemma, Negash, 2014]. The results of the majority of empirical papers [Bonaime, 2012; Andriosopoulos, Hoque, 2013] found out that in case of correcting the capital structure by means of share repurchase, the companies with the capital structure below the target value (the debt load is below the target value) have the highest speed of adjustment to the target capital structure. On the contrary, the companies with the debt load above the target value are greatly limited in the opportunity to attract joint-stock capital, and high cost of the capital and significant interest payments may lessen the company opportunities for debt repayment, this, in its turn, results in reduction of the speed of adjustment. As long as this hypothesis has not been tested for emerging markets we will verify it in the course of our research. *Hypothesis 3: the companies with an excessive debt load adjust to the target capital structure more slowly than the companies with the debt value below the target value resulting from share repurchase.*

The company cash flows also influence significantly the costs of the capital structure optimization: if the company possesses large positive cash flows they may serve as a moderately priced source of share repurchase, thus reducing significantly the costs of financial leverage optimization. In case of negative cash flows the company faces the necessity to finance the repurchase procedure using borrowed funds. The paper by [Faulkender et al., 2012] revealed that companies with big absolute values of free cash flows have the highest speed of adjustment, while companies with big negative cash flows are forced to use outside financing in the form of a debt or joint-stock capital, depending on whether the leverage is above or below the optimum value. *Hypothesis 4: companies with significant free cash flows as a result of share repurchase have higher values of the speed of adjustment.*

Intra-corporate determinants of a company and macro-economic factors also significantly influence the degree of success of share repurchases in correcting the capital structure. Consequently, we will phrase and substantiate below hypotheses on the nature of influence of such intra-corporate and external factors.

The *company size* is one of the main determinants of the speed of adjustment. First, major companies are characterized by an easier ability to access capital markets. Due to a high negotiating power when dealing with creditors, such companies have a smaller cost of debt [Mukherjee, Mahakud, 2010]. Second, due to widespread occurrence of analytical recommendations about major companies, a lower information asymmetry with creditors or investors is typical of them [Aybar-Arias et al., 2012]. Apart from that, major companies have significantly lower fixed costs pertaining to share repurchases than small companies [Chipeta, Mbululu, 2013]. Therefore, major companies have a higher speed of adjustment to the target capital structure. It should be noted that the influence of company size on the speed of adjustment to the target capital structure has been tested in the Russian market on numerous occasions [Kokoreva, 2013], but no empirical conclusions have been made with reference to share repurchase for Russia as well as for all BRICS countries. *Hypothesis 5: company size exerts a significant positive influence on the speed of adjustment to the target capital structure as a result of share repurchase.*

The next factor which influences significantly the capital structure as a result of share repurchase is the *company opportunities for growth*. Along with the possibility to attract debt financing, companies with great opportunities for growth are more attractive for external investors and this facilitates access to joint-stock capital. Access to debt capital as well as to joint-stock capital gives such companies the opportunity to be more flexible in their policy of fund raising and to adjust the capital structure to the target value quicker. In papers by [Drobetz, Wanzenried, 2006; Aybar-Arias et al., 2012; Chipeta, Mbululu, 2013; Komera, Lukose, 2016], the authors perceived a significant positive dependence between the speed of adjustment and opportunities for growth of the company.

In consequence of the absence of empirical conclusions as regards influence of the companies' opportunities for growth on the speed of attainment of the target capital structure in emerging markets as a result of share repurchase we will test the hypothesis which was validated in mature markets, the more so, because we consider its logic to be correct. *Hypothesis 6: the higher is the company opportunity for growth the higher is the speed of adjustment of the capital structure to the target value as a result of share repurchase.*

The company's profitability also exerts a significant influence on the speed of adjustment to the target capital structure: more profitable companies may use internal sources to finance share repurchase as well as may raise borrowed funds on more favourable terms due to their financial stability. Consequently, lower costs of adjustment to the target capital structure are typical of such companies and the companies may raise funds quicker. Thus, a positive dependence between the company profitability and its speed of adjustment to the target capital structure was revealed in papers by [Cook, Tang, 2010; Haron et al., 2013]. We also may presume that for the companies in emerging markets profitability gives an opportunity to raise internal financing quickly and without additional costs and in view of this – to approximate quicker the target value by share repurchase. *Hypothesis 7: the company profitability exerts a significant positive influence on the speed of adjustment to the optimum capital structure as a result of share repurchase.*

It is also necessary to take into consideration the influence of macroeconomic factors on the speed of adjustment within the share repurchase procedure which influence the company shares quotation. Usually among *macroeconomic determinants* which influence the speed of adjustment, the GDP growth rate in the country and inflation rate are distinguished. High GDP growth rates have a favorable impact on the company's opportunity to raise funds in the capital markets, they get more possibilities to shorten the deviation from the target capital structure, and this results in increase of the speed of adjustment [Haas, Peeters, 2006]. A positive influence of GDP growth rate was also received in the paper by [McMillan, Camara, 2012] who studied the speed of adjustment for US companies in the period between 1991 to 2009. *Hypothesis 8: the higher the economic growth of a country, the higher the speed of adjustment of the capital structure to the target value as a result of share repurchase.*

A high inflation rate exerts a significant influence on the balance sheet values of the debt and joint-stock capital giving the companies the opportunity to influence more the balance sheet values of the leverage, increasing the speed of adjustment [Haas, Peeters, 2006]. A high inflation rate may affect adversely the actual cost of raising debt capital, and this also should increase the speed of adjustment [Chipeta, Mbululu, 2013]. *Hypothesis 9: the higher the inflation rate in a country, the higher the speed of adjustment of the capital structure to the target value as a result of share repurchase.*

The interest rate level in an economy influences significantly the speed of adjustment: the higher the interest rate (the basis for measuring of which in the Russian economy is the key interest rate) is, the higher the cost of raising the debt capital, consequently, the speed of adjustment to the target capital structure is reduced when rates of an economy grow [Caglayan, Rashid, 2014]. *Hypothesis 10: the higher the interest rates level in a country is, the lower the speed of adjustment of the capital structure to the target value as a result of share repurchase.*

Institutional determinants and securities market development level also exert a great influence on the companies' speed of adjustment to the target capital structure. The following institutional factors influence the correlation of benefits and expenses caused by adjustment of the capital structure to the optimum value: ease of access to capital markets, maturity of the system of finance, protection of creditors' rights, property rights protection, information asymmetry between the company and investors or creditors [Öztekin, Flannery, 2012]. Many papers also study the influence of the relative maturity of the securities market on the attainment by the company of the target value. The paper [by Koerniadi et al., 2007] on the basis of a cross-country research revealed that the higher the maturity of the securities market, the smaller the deviation from the target capital structure after share repurchase because a high maturity of the securities market significantly facilitates access to financial resources for companies. The paper by Nivorozhkin [2005] revealed a positive dependence of the speed of adjustment to the target capital structure on such a level. Indeed, the practical experience of emerging economies shows that banks are often reluctant to grant loans to companies and claim high loan interest rates, and besides which the ability of banks to grant loans are limited to the banks' resources. Securities markets are also often limited by the amount of finance which the companies are able to raise. Access to funding in emerging markets is much lower than in mature economies, therefore raising funds to correct the capital structure on the basis of share repurchase may be difficult, therefore we state the following hypothesis. *Hypothesis 11: the higher the maturity of securities market in the country is, the higher the speed of adjustment of the capital structure to the target value as a result of share repurchase.*

Research Model

As we've shown in the first part of the paper a one-stage procedure of evaluation of the speed of adjustment does not make it possible to evaluate the influence of certain determinants on the speed of adjustment to the target capital structure, therefore we will use a *two-stage evaluation method* in the present paper. At the first stage we will define the target capital structure of the company on the basis of model (2). Using the obtained values of coefficients and values of determinants of the target capital structure we will evaluate the target value of the financial leverage of the capital structure $\widehat{LEV}_{j,t}^*$. Further, having

obtained the above values we may calculate the value of deviation of the financial leverage from the optimum value $\widehat{Dev}_{j,t}$. using model (4). On the basis of the obtained value we will then get the following *model specification, including in it a dummy variable of repurchase* ($Buyback_{jt}$):

$$LEV_{j,t} - LEV_{j,t-1} = \lambda_j \widehat{Dev}_{j,t} * Buyback_{jt} + \varepsilon_{j,t}. \quad (9)$$

Insofar as the speed of adjustment may depend on dozens of factors (it is affected by financial results of the company which defined the value of the target capital structure itself, economic and institutional values), consequently, the *speed of adjustment is a value defined by a certain list of determinants* which in its turn helps to obtain the *model specification to analyze the influence of various determinants on the speed of adjustment* of a company to the target capital structure:

$$LEV_{j,t} - LEV_{j,t-1} = (\sum \beta_i Z_{j,t}) * \widehat{Dev}_{j,t} * Buyback_{jt} + \varepsilon_{j,t}. \quad (10)$$

In order to analyze the difference in the speed of adjustment for overleveraged companies and underleveraged companies we used the partial adjustment model with switching modes taking into consideration *sre repurchase*:

$$LEV_{j,t} - LEV_{j,t-1} = \lambda_1 (LEV_{j,t}^* - LEV_{j,t-1}) 1_{(q_{usc})} * Buyback_{jt} + \lambda_2 (LEV_{j,t}^* - LEV_{j,t-1}) 1_{(q_{usc})} * Buyback_{jt} + \varepsilon_{j,t}, \quad (11)$$

where $1_{(q_{usc})}$ is the indicator of the capital structure being below the target value; λ_1 is the speed of adjustment for the companies which capital structure is below the target value; $1_{(q_{usc})}$ is the indicator of the capital structure being above the target value; λ_2 is the speed of adjustment for the companies with excessive debt load.

When evaluating the speed of adjustment of the capital structure to the target value of the financial leverage it is necessary to take into consideration potential benefits and expenses caused by a change of the leverage value: the more the benefit from approximation to the target value is, the higher the speed of adjustment should be. In this case one of the main factors defining the balance of benefits and expenses caused by change of the financial leverage value is the *distance from the actl value to the optimum one (the direction in which it is necessary to optimize the capital structure), as well as the amount of the company cash flows*. Following the methodology offered in article by [Faulkender M., Flannery M., Hankins K., Smith J., 2012, p. 637] the influence of the value of deviation from the target debt load and cash flows of the company on the speed of adjustment is studied using the following model:

$$LEV_{j,t} - LEV_{j,t-1} = [\gamma_1 ExcessDev_{jt} + \gamma_2 OverlapDev_{jt} + \gamma_3 OverlapCF_{jt} + \gamma_4 ExcessCF_{jt}] * \sin g_{jt} * Buyback_{jt} + \varepsilon_{jt}, \quad (12)$$

where $ExcessDev = (|Dev| - |CF|) * DevLarger$ is a part of the value of deviation of the actual value of the financial leverage from the target one which is not covered by the company money flow; $OverlapDev = |CF| * DevLarger$ a part of deviation covered by the company money flow; $ExcessCF = (|CF| - |Dev|) * (1 - DevLarger)$ a part of the company money flow exceeding the value of deviation from the main leverage;

$OverlapCF = |Dev| * (1 - DevLarger)$ the value of deviation from the target financial leverage when the company's money flow exceeds this value; Sin a dummy variable which equals -1 for an overlevered company and 1 for underlevered companies; $DevLarger$ – a dummy variable which equals 1 if the value of deviation of the actual capital structure value from the target value exceeds the company cash flows value $(|Dev| - |CF|) > 0$, 0 – otherwise (i.e. if the value of deviation of the actual capital structure value from the target value is less or equals the company cash flows value

The first two criteria ($ExcessDev$ и $OverlapDev$) assess the speed of adjustment to the target capital structure in a case where the company's money flow value is less than the discontinuity between the actual and target capital structure. A part of this deviation equaling the money flow value may be covered at a higher speed because the capital structure optimization expenses are less due to the use of the company's proprietary funds in case of a positive cash flow, or in view of the company's need in additional raising of debt capital in case of negative cash flows. In its turn the part of the deviation exceeding the cash flows value should be covered at a lower speed as long as the capital structure change expenses will be bigger.

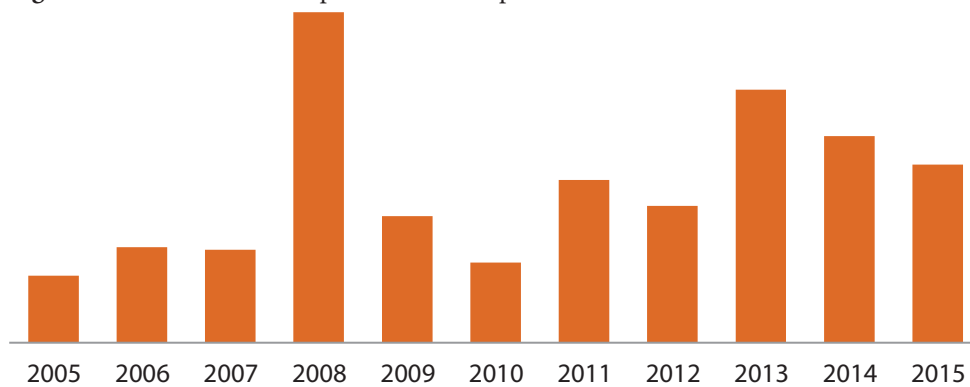
The last two criteria ($ExcessCF$ и $OverlapCF$) describe the case when the company's money flow exceeds the value of deviation from the target capital structure. In this case the company is able to cover the whole discontinuity between the actual and target leverage, consequently the speed of adjustment should be significantly higher. In this case the value of the part of the money flow exceeding the discontinuity between the actual and target leverage should not influence the speed of adjustment as long as there is no need in the capital structure optimization.

The variables of the research are described in table 1.

Table 1. Variables of the Research

Variable	Variable description	Designation	Calculation formula	Source of data
Balance sheet leverage	Ratio of the company joint debt to the balance sheet value of its assets	BLEV	$\frac{\text{Total Debt}}{\text{Total Assets}}$	Bloomberg
Market leverage	Ratio of the company joint debt to the total of its joint debt and market value of its joint-stock capital	MLEV	$\frac{\text{Total Debt}}{\text{Market Capitalization}}$	Bloomberg
Company size	Napierian logarithm of the company total assets	Size	$\text{Ln}(\text{Total Assets})$	Bloomberg
Return on the company capital	Ratio of the company net profit to the total assets	ROA	$\frac{\text{Net Income}}{\text{Total Assets}}$	Bloomberg
Opportunities of growth of the company	Ratio of capital investments to the company total assets	Growth	$\frac{\text{Capital Expenditures}}{\text{Total Assets}}$	Bloomberg.
Share of the company tangible assets	Share of the company non-current assets to total assets	Tang	$\frac{\text{Property Plant and Equipment}}{\text{Total Assets}}$	Bloomberg
Amount of the company cash flows	Ratio of operating income before interest, taxes and depreciation payment after deduction of capital expenditures within the industry to total assets	CF	$\frac{\text{EBITDA} - \text{Tax} - \text{Interest}}{\text{Total Assets} - \frac{\text{Capex}_{\text{industry}}}{\text{Total Assets}_{\text{industry}}}}$	Bloomberg
Level of the company business risk	Standard deviation of the operating income value to the company total assets	Risk	$\text{St.dev.}\left(\frac{\text{EBIT}}{\text{Total Assets}}\right)$	Bloomberg
Amount of repurchased shares	The amount of shares declared for repurchase to the total amount of outstanding shares	Share	$\frac{\text{Repurchased common shares}}{\text{Outstanding common shares}}$	Bloomberg
Economic growth	Annual GDP growth rate per capita expressed as a percentage	GDP	GDP per capita growth, annual %	Database of World Bank
Inflation rate	Consumer Price Index (CPI) expressed as a percentage	Inflation	CPI, annual %	Database of World Bank
Interest rate level	Average rate for loans countrywide	Lending	Lending interest rate, %	Database of World Bank
Stock market degree of maturity	Ratio of the total cost of the shares traded in the market to average market capitalization	Stock market	Stock market turnover ratio, %	Database of World Bank

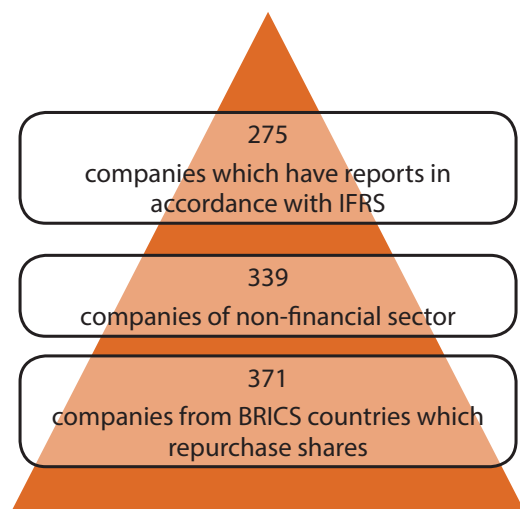
Source: prepared by the authors.

Figure 2. Number of share repurchases in the period of 2005 to 2015

Source: on the basis of the authors' calculations.

Description of the Companies Selection for the Research

In order to carry out the research we made a selection of public companies from BRICS countries: Brazil, Russia, India, China, and RSA. The selection was made in several stages. At the first stage we made a selection of companies from BRICS countries (fig. 1) which repurchased shares in the period of 2000 to 2016 (371 companies). Then, we rejected 32 companies of the financial sector due to significant difference of their reporting structure from non-financial companies (the selection now consisted of 339 companies of non-financial sector). In order to ensure data comparability we rejected 64 companies from the selection of Russian companies which do not maintain records or do not publish records in publicly available sources in accordance with International Financial Reporting Standards. Consequently, the selection accounted for 275 companies.

Figure 1. Criteria of selection of companies for the research

Source: on the basis of the authors' calculations.

From the point of view of repurchase characteristic features the following was included in the selection:

- Declared repurchase programs which have been completed;
- Share repurchase in the open market⁴;
- Share repurchase with known number of shares declared for repurchase.

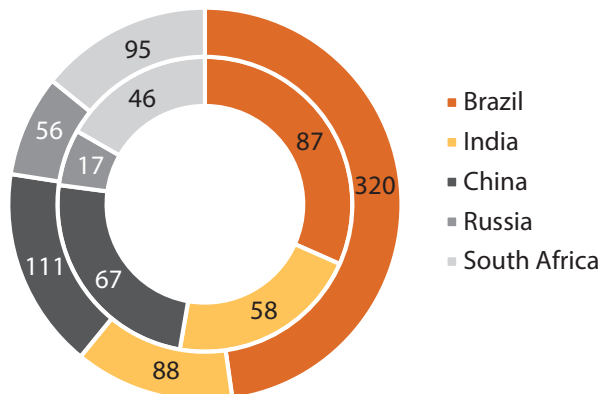
While collecting data on the companies we identified a non-negligible omission of significant values in the period of 2000 to 2004 and in 2016. With that in mind, we decided to reduce the research period to 10 years. The data on the companies repurchasing their shares, dates of announcement of share repurchase, the share of repurchased stocks, and types of repurchase were developed on the basis of *Bloomberg* information. All financial indicators considered in this research were also taken from the *Bloomberg* database. Each value was represented in the database in millions of US dollars and was stated per calendar year in order to ensure data comparability. The macroeconomic data used in the research have been obtained from the database of the World Bank and indicate the percentage change of nominal GDP of each country in US dollars, the growth rate of consumer prices, the rate of borrowing and the stock market turnover ratio in each analyzed country.

Finally, we selected 670 repurchases carried out in the open market in various economic sectors in the period 2005 to 2015. See a breakdown of selected repurchases by years in fig. 2 below.

Fig. 3 represents a chart of allocation of share repurchase on a country-by-country basis. The number of companies on a country-by-country basis is irregular with an overwhelming majority of observations represented by Brazilian companies (320 out of 670). Allocation of the number of companies included in the selection on a country-by-country basis is more regular. In total the selection is comprised of data for 275 companies in the period of 2005 to 2015.

⁴ As long as they account for the majority of share repurchases (over 90%), and other types of repurchases are of specific character which is not taken into consideration by the development methodology of this research.

Figure 3. Allocation of the number of share repurchases and number of companies on a country-by-country basis for the period of 2005 - 2015



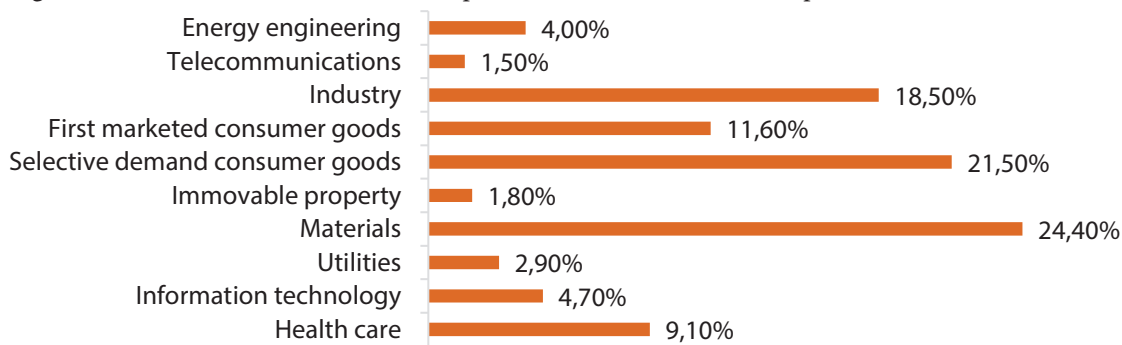
Source: on the basis of the authors' calculations.

Allocation of companies by sectors of the economy is regular (fig. 4), at the same time the basic amount of companies is concentrated in the basic sectors such as those involved in the manufacture of materials, goods of selective demand, and industry.

The average value of the balance sheet leverage for all studied selections amounted to approximately 26% of the total value of the company assets, which is approximately 11 percentage points less than the market leverage value (table 2).

Broken down by country, on average the balance sheet debt load in all countries is at a comparable level of 25-30% (table 3). However, a discontinuity in values is observed for the market leverage: a comparatively big debt load of companies from India, Brazil and Russia (40-45%). Comparison of companies by financial indicators is also of special interest. Thus, Chinese and Brazilian companies are at average less profitable than in other BRICS countries, besides the opportunities for growth of companies in these countries are evaluated virtually at the same level as in other countries. The average size of a company in Russia is substantially bigger than in other BRICS countries, which indicates a strong concentration of the companies' market shares in the economy. Russia is also characterized by the biggest share of tangible assets in the general structure of the company assets.

Figure 4. Allocation of the number of companies on a sectoral basis in the period of 2005 - 2015



Source: on the basis of the authors' calculations.

Table 2. Descriptive statistics of values all through the studied selection

Variable	Average	Median	Minimum	Maximum	Stand.deviation
BLEV	0.26	0.25	-	1.49	0.18
MLEV	0.37	0.20	-	5.61	0.51
Size	6.84	6.70	-7.82	12.70	1.76
ROA	6.89	5.97	-72.08	120.81	9.00
Growth	0.07	0.05	-	0.87	0.06
Tang	0.52	0.52	0.01	0.99	0.20
Risk	0.64	0.65	0.19	0.93	0.06
CF	0.02	0.02	-0.57	1.43	0.11
Share	0.01	-	-	0.75	0.05
GDP	4.49	4.46	-7.85	13.64	4.11
Inflation	5.82	5.66	-0.70	15.53	2.89
Lending	19.58	10.75	4.35	55.38	16.24
Stock market ratio	89.42	69.07	22.19	290.97	66.82

Source: on the basis of the authors' calculations.

Table 3. Average value of indicators broken down by countries

Variable	Brazil	China	India	Russia	South Africa
BLEV	0.29	0.26	0.25	0.30	0.20
MLEV	0.45	0.29	0.40	0.45	0.24
Size	7.14	6.74	6.03	8.77	6.72
ROA	5.41	5.34	9.06	8.20	8.73
Growth	0.06	0.07	0.08	0.10	0.06
Tang	0.53	0.49	0.51	0.67	0.51
Risk	0.64	0.67	0.63	0.61	0.62
CF	0.03	-0.01	0.01	0.05	0.04
Share	0.01	0.01	0.01	0.01	0.01
GDP	1.77	9.20	6.11	2.68	1.35
Inflation	5.81	2.78	8.12	9.78	5.92
Lending	42.33	5.83	10.92	11.22	10.58
Stock market ratio	62.18	189.69	74.13	49.03	29.10

Source: on the basis of the authors' calculations.

Research Findings

At the first stage we carried out the *evaluation of the target capital structure* of the studied companies. The following factors (for which significance has been proven in mature as well as in emerging markets in papers by [Booth et al., 2001; Bhaduri, 2002; Mitton, 2008]) were used as determinants of the target capital structure: share of the company tangible assets (*Tang*); the company size (*Size*), the company opportunities for growth (*Growth*), the company profitability (*ROA*), degree of the company business risk (*Risk*), the company economic growth (*GDP*), inflation rate in the country (*Inflation*), as well as the interest rate level in the country as an indicator of credit availability (*Lending*). The results of the evaluation of model (2) are represented in table 4. In order to avoid biased standard errors, all models have been evaluated using robust standard errors. The model based on the market financial leverage got a higher value of R^2 -within which indicates a higher quality of the model. Consequently, we'll use the results of the evaluation based on the market financial leverage as the primary relevant evaluation model.

For the model evaluating the influence of factors on the market leverage the following were significant at the 1% level: the company indicators of return on capital, shares of tangible assets, economic growth and inflation rate in the country. At the 5% level, the indicator of the company opportunities for growth was significant. At the 10% level, the business risk quotient was significant. The company size and interest rates levels do not exert a significant influence on the capital structure of the companies which repurchase shares in the open market.

Further, a new variable was obtained from each model after evaluation of regression – that of the target capital structure used for calculation of the speed of adjustment to the target capital structure when companies repurchase shares in the open market.

Determinants of the company and macroeconomic factors do not just define the target value of the financial leverage, but also influence how quickly the company can and will adjust to it. The results of evaluation of model (10) are presented in table 4. The model based on the balance sheet financial leverage got a higher value of R^2 -within which indicates a higher quality of the model, therefore we'll use as a basis the results of the evaluation focused on the balance sheet financial leverage. Considered overall, it may be noted that the indicators which express the company size, its profitability and interest rates levels show a multidirectional influence provided the leverage is measured on the basis of balance sheet or market indicators. As regards other indicators the direction of influence matches.

For the model evaluating the influence of factors on the balance sheet leverage the inflation rate in the country was significant at the 1% level. At the 5% level, the indicators of the company size, the company opportunities for growth and the amount of repurchased shares were significant. At the 10% level, the level of economic development in the country was significant. The companies' profitability, interest rates level and the maturity of the stock market do not exert a significant influence on the speed of adjustment of the companies which repurchase shares in the open market.

Table 4. Results of evaluation of determinants of the target capital structure and speed of adjustment to it

	Evaluation of determinants of the target capital structure (model 2)		Evaluation of determinants of the speed of adjustment (model 10)	
	BLEV	MLEV	BLEV	MLEV
<i>Const</i>	0.1721* (0.0951)	0.7160* (0.4119)	0.0025*** (0.0002)	0.0101*** (0.0015)
<i>Share</i>			3.0214** (0.5070)	5.1836 (1.2452)
<i>Size</i>	0.0105 (0.0074)	0.0082 (0.0218)	0.0608** (0.0283)	-0.1067* (0.0548)
<i>Growth</i>	0.1027 (0.0633)	0.4431** (0.2236)	1.3318** (0.5847)	0.3482 (1.0887)
<i>ROA</i>	-0.0038*** (0.0009)	-0.0118*** (0.0033)	0.0010 (0.0014)	-0.0099*** (0.0026)
<i>Tang</i>	0.1638*** (0.0535)	0.4337*** (0.1441)		
<i>Risk</i>	-0.0697 (0.1325)	-0.8468* (0.5061)		
<i>GDP</i>	0.0050* (0.0011)	0.0162*** (0.0043)	0.0820* (0.0172)	0.04981* (0.0266)
<i>Inflation</i>	-0.0022** (0.0011)	-0.0186*** (0.0036)	-0.1063*** (0.0194)	-0.1015*** (0.0294)
<i>Lending</i>	-0.0005 (0.0008)	-0.0006 (0.0023)	-0.0019 (0.0039)	0.0145** (0.0060)
<i>Stock market</i>			0.01316 (0.0009)	0.0024* (0.0012)
<i>LSDV R²</i>	0.72	0.73	0.58	0.44
<i>Within R²</i>	0.56	0.59	0.36	0.26
<i>N</i>	3,025	3,025	2,750	2,750

Note: results of evaluation using OLS with fixed effects of models (formula (2) and formula (10) correspondingly) by means of econometric package Gretl. In the brackets under the values of ratio the value of standard error is indicated, *** corresponds to the level of significance of 1%, ** - 5%, * - 10%.

Source: on the basis of the authors' calculations.

Table 5. Results of Testing Models of Evaluation of the Speed of Adjustment

Evaluation of the speed of adjustment of balance sheet and market leverage broken down by countries												
	Total selection		Brazil		China		India		Russia		South Africa	
	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV
Const	0.0027*** (0.0001)	0.0110*** (0.0015)	0.0086*** (0.0005)	0.0211** (0.0058)	−0.0021*** (0.0001)	−0.0124*** (0.0001)	−0.0036*** (3.42*10 ^{−5})	0.0172*** (0.0011)	0.0158*** (0.0014)	0.0004 (0.0025)	0.0017*** (0.0003)	0.0153*** (0.0055)
SOA buyback	0.4272*** (0.0553)	0.5396*** (0.1152)	0.4294*** (0.0828)	0.6343*** (0.1921)	0.4149*** (0.1015)	0.4921*** (0.1152)	0.4324*** (0.0700)	0.4378*** (0.1205)	0.4974 (0.3112)	0.8032*** (0.1539)	0.4346** (0.1814)	0.4759 (0.2309)
R ²	0.65	0.60	0.64	0.65	0.68	0.61	0.66	0.63	0.61	0.58	0.63	0.59
Correct. R ²	0.57	0.53	0.51	0.59	0.57	0.54	0.58	0.56	0.54	0.50	0.55	0.51
N	2,750	2,750	870	870	670	670	580	580	170	170	460	460
Half-life ⁵	1.24	0.89	1.24	0.69	1.29	1.02	1.22	1.20	1.01	0.43	1.22	1.07
Evaluation of the speed of adjustment for overlevered and underlevered companies												
	Total selection		Brazil		China		India		Russia		South Africa	
	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV	BLEV	MLEV
Const	0.0028*** (0.0005)	0.0082*** (0.0025)	0.0086*** (0.0016)	0.0143* (0.0078)	−0.0027*** (0.0006)	−0.0129*** (0.0013)	−0.0039*** (0.0005)	0.0145*** (0.0022)	0.0179*** (0.0015)	−0.0011 (0.0028)	0.0036*** (0.0007)	0.0250*** (0.0018)
Debt above the target value	0.2915*** (0.0686)	0.2662 (0.1838)	0.4233** (0.1955)	0.1985 (0.4327)	0.1928 (0.2715)	0.4458** (0.2129)	0.3977*** (0.0446)	0.1796 (0.1474)	0.2327 (0.2684)	−0.1210 (0.2484)	0.2108 (0.1582)	0.2884 (0.2011)
Debt below the target value	0.5704*** (0.1048)	0.6057*** (0.1279)	0.4319*** (0.1000)	0.7196*** (0.1939)	0.4845*** (0.0981)	0.5325*** (0.1092)	0.4865*** (0.1418)	0.5180*** (0.1453)	0.4326*** (0.3682)	0.8149*** (0.1570)	1.0163*** (0.2906)	0.9451*** (0.1004)
R ²	0.56	0.73	0.53	0.80	0.46	0.72	0.52	0.74	0.48	0.70	0.57	0.69
Correct. R ²	0.35	0.54	0.31	0.59	0.37	0.54	0.37	0.56	0.31	0.51	0.36	0.51
N	2,750	2,750	870	870	670	670	580	580	170	170	460	460

Note: results of evaluation using combined OLS. In the brackets under the values of ratio the value of standard error is indicated, *** corresponds to the level of significance of 1%, ** - 5%, * - 10%.
Source: on the basis of the authors’ calculations.

⁵ Half-life = ln(0,5)/ ln(1− SOA buyback) – this value shows in how many years the company will shorten for 50% the distance between the current and target value of the capital structure.

Hypothesis 2 on the influence of the size of repurchased shares on the speed of adjustment to the target capital structure was also *confirmed*. A large amount of shares repurchased at once results in significant reduction of the company owned capital and in a quicker correction of the capital structure against the target value. It should be noted that the ratio of the studied variable has the biggest values both in general in the selection and for the companies from Brazil, Russia and South Africa. Consequently, we can make a conclusion that in a share repurchase aiming at correction of the capital structure, the companies have to show consideration for the choice of the amount of repurchased shares.

Hypothesis 5 on the influence of the company size on the speed of adjustment while repurchasing shares in the open market was *confirmed*. Indeed, large companies have low financial imbalance costs and are more credit worthy in comparison with small companies. Consequently, investors trust them more and as a result they gain more opportunities to finance share repurchase (both using their own sources and using debt financing). For this very reason large companies will have higher values of speed of adjustment to the target capital structure. However, it should be noted that in Russia this factor adversely affects the company financial leverage. Consequently, large Russian companies are less motivated to correct the capital structure and do not use share repurchase to manage the capital structure.

Hypothesis 6 on the positive influence of the company opportunities for growth on the speed of adjustment to the target capital structure using share repurchase was *confirmed*: companies with great opportunities for growth due to an active financial policy (i.e. where they have access both to debt and joint-stock capital as they are more attractive for external investors) use more opportunities to finance share repurchase and, consequently, have higher values for speed of adjustment to the target capital structure.

Hypothesis 7 on the positive influence of the company profitability on the speed of adjustment was *confirmed*. More profitable companies may use both internal and borrowed sources to finance share repurchase and this results in a quicker correction of the capital structure towards the target value. Nevertheless, for Brazilian and Chinese companies the rate of return of the aggregate capital exerts a slight negative influence, and consequently, more profitable companies may disregard their bigger financial flexibility. While such a company has high profitability values the management is much less motivated to optimize the capital structure and reduce the cost of its raising. However, no sooner than profitability indicators decrease, a quicker optimization of the capital structure may become a more important source of improving the company effectiveness.

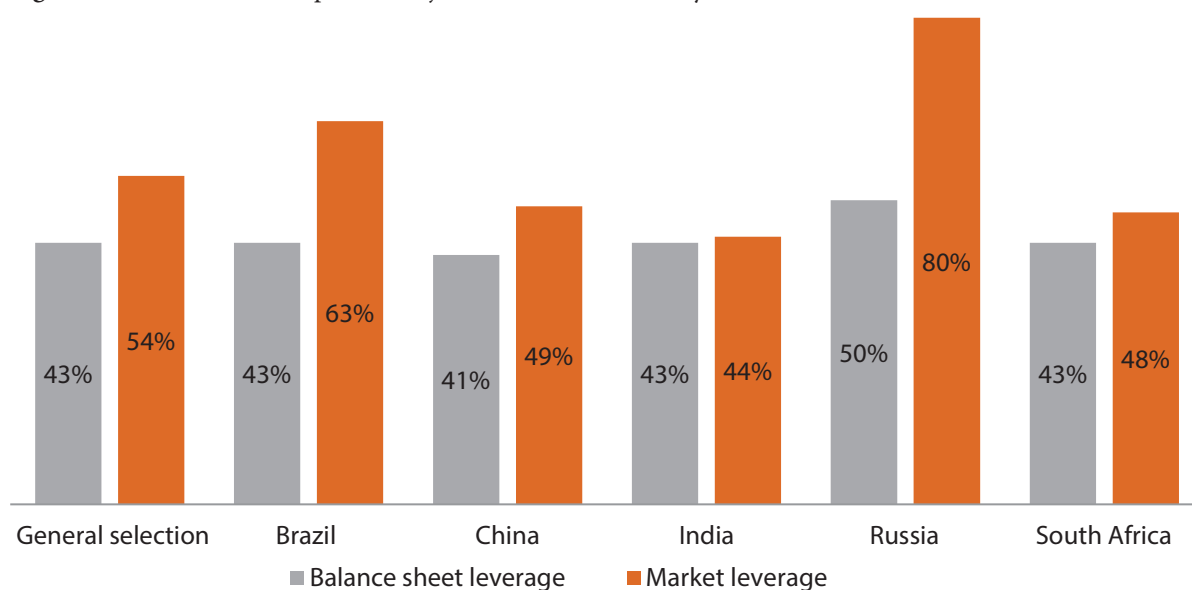
Further, we shall consider the results of the evaluation of the influence of macroeconomic factors and quality of maturity of the stock market on the speed of adjustment to the target capital structure as a result of share repurchase by companies in the open market. *Hypothesis 8* on

the positive influence of the country economic growth on the speed of adjustment was *confirmed* and *hypothesis 9* on the positive influence of the inflation rate in the country on the companies' capital structure was *not confirmed*. Consequently, in the period of economic growth and low inflation, a company has more opportunities to finance share repurchase. In this situation, the company may use both its owned capital and debt capital (in the periods of economic upturn a lending boom is observed). This, in turn, results in higher values of the speed of adjustment. *Hypothesis 10* on the negative influence of the rates of borrowing in the country on the company capital structure was also *confirmed*: when interest rates grow, credit availability in the country recedes, and consequently a lesser flexibility in the choice of financing for share repurchase is observed with the companies. This inhibits the speed of attaining the target value of the capital structure. It should be noted that this indicator turned out to be insignificant in general for the selection. *Hypothesis 11* on the positive influence of the maturity level of the stock market of the country on the speed of adjustment to the target capital structure as a result of share repurchase in the open market was *confirmed*, however this indicator does not significantly influence the speed of adjustment.

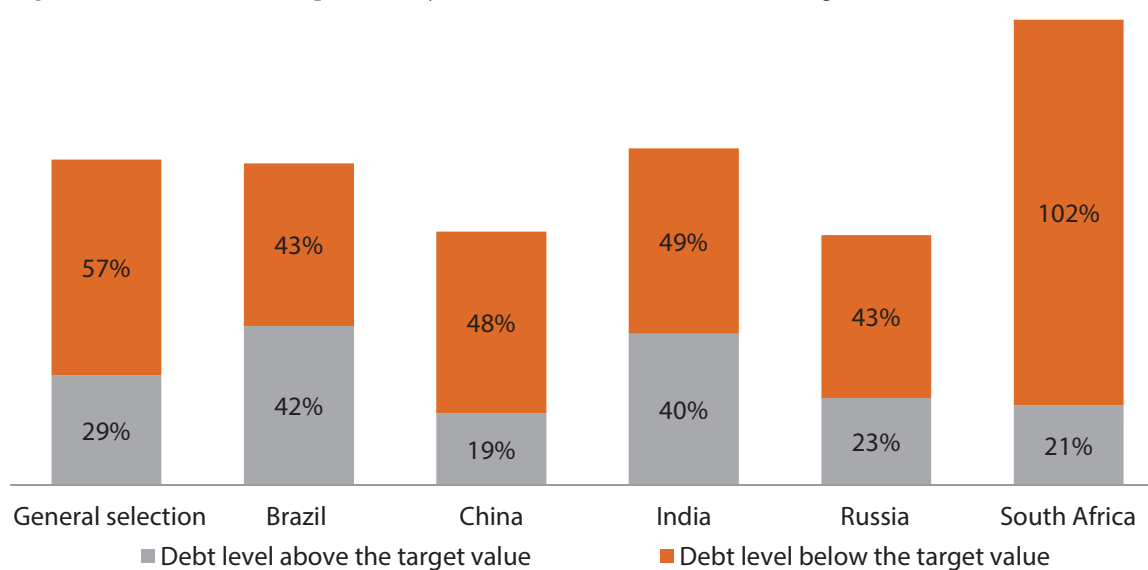
As a result of the analysis of determinants of the speed of adjustment to the target capital structure using share repurchase, we may make a conclusion that *all hypotheses were confirmed except for hypothesis 9 on the influence of the inflation rate in the country, and hypotheses 7, 10 and 11 were confirmed, subject to a proviso as regards degree of significance*.

Then, we carried out *evaluation of the speed of adjustment to the target capital structure using share repurchase in an open market*, the test results are presented in table 5.

In general, the obtained evaluations of the speed of adjustment indicate that *as a result of share repurchase, the capital structure adjusts towards the target value*. This is in line with the results of previous research (see fig. 5). Consequently, *hypothesis 1 is confirmed* and share repurchase may therefore be declared an efficient instrument for correction of the capital structure. Thus, for the whole selection of BRICS countries the speed of adjustment of the balance sheet leverage is approximately 43%. As such, in one year companies may reduce the distance between the actual and target capital structure by 43% as a result of share repurchase. In a breakdown by country, one can observe that the results of evaluation of the speed of adjustment for the balance sheet leverage are approximately identical and amount to 43%. However this indicator is the biggest for Russian companies – 50%, (i.e. Russian companies eliminate a half of deviation from the target capital structure in 1.01 year - this value is indicated in the line *Half-life* for other countries, table 5). Apart from that, for Russian companies the value of the speed of adjustment for balance sheet values turned out to be insignificant. Probably there exist significant deviations in the speed of adjustment depending on the direction of the deviation from the target capital structure.

Figure 5. Evaluation of the Speed of Adjustment Broken down by Countries

Source: on the basis of the authors' calculations.

Figure 6. Evaluation of the Speed of Adjustment of the Balance Sheet Leverage

Source: on the basis of the authors' calculations.

It should be noted that speeds of adjustment for the market leverage showed bigger values in comparison with the balance sheet leverage: in general, for the BRICS countries' companies the speed of adjustment amounted to 54%, consequently, the companies eliminate a half of the discontinuity in 0.89 years. Apart from that, companies from Russia and Brazil show the higher speed of adjustment (within 63–80%). It indicates that the companies are able to approximate the target structure in a very short period. Other countries also show rather quick rates of the speed of adjustment in the range of 44 to 49% which correspond to the evaluation of the speed of adjustment for the balance sheet leverage.

Results of evaluation of the mode switching partial adjustment model taking into consideration share repurchase (model 11) are represented in fig. 6 for the

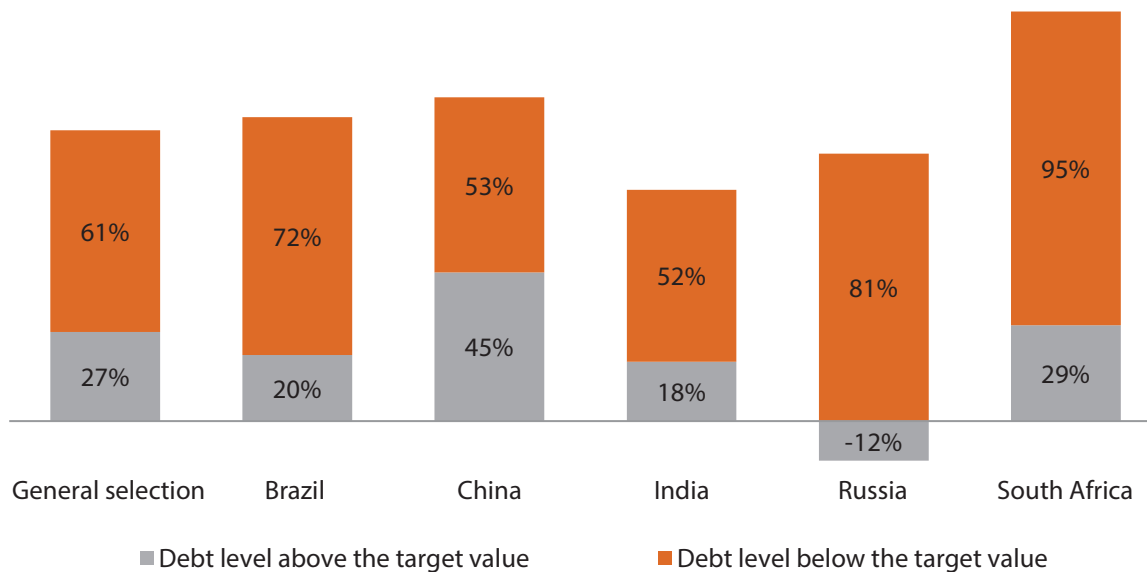
balance sheet financial leverage and in fig. 7 – for the market leverage. In general, the results obtained indicate that *underleveraged companies approximate the optimum capital structure significantly quicker* than companies with excessive debt load: the speed of adjustment of the balance sheet values of the leverage for the companies with an excessive debt load on average amounts to 29%, market values - 27%, (and this, as you can see by fig. 6 and 7, is almost twice as slow as for the companies with an insufficient amount of debt). Consequently, *hypothesis 3*, that companies with an excessive debt load adjust to the target capital structure when repurchasing shares more slowly, *is confirmed*. The biggest differences in the speed of adjustment are observed for Chinese and South African companies when the balance sheet leverage model is evaluated. When evaluating the market leverage model

the biggest differences in the speed of adjustment depending on the deviation from the target capital structure are observed for Brazil, India and South Africa.

After evaluation of the mode switching partial adjustment model, the differentiating conclusions as regards Russian and South Africa companies consist in the fact that for them the *value of the speed of adjustment is significant as regards the underleveraged companies while in general all through the selection of companies from the abovementioned countries the speed is not significant.*

Consequently, the obtained result may be explained by the fact that companies are able to increase the debt load rather easily while the debt level is below the target value, because in this case share repurchase exerts a greater influence on the capital structure, and thus the companies are able to increase the debt up to the target value at a rather high speed. For Brazil, India and China the speed of adjustment is significant both for underleveraged companies and for overleveraged companies.

Figure 7. Evaluation of the Speed of Adjustment of the Market Leverage



Source: on the basis of the authors' calculations.

At the same time evaluation of the model for Russian companies demonstrates controversial results: the companies with an excessive level of debt load do not approximate the target capital structure, but on the contrary, move away from it (the debt value increases against the target value), and this contradicts the hypothesis on the companies' striving to optimize the capital structure. It should be noted that this effect was observed only for those companies with an excessive debt value.

Thus, the *companies in BRICS countries are prone to adjust quicker to the target capital structure when the financial leverage is below the target value* while companies with an excessive debt load perform optimization much more slowly. Apart from that, the decision on share repurchase in order to optimize the financial leverage is taken in accordance with the evaluated benefits and costs caused by such adjustment:

- *if the current capital structure of the company is close to the target one* the company benefits from share repurchase may be significantly less than both the costs which include commission fees for share repurchase and transaction costs;
- *if a deviation from the optimum capital structure is rather great* the company benefits will be significantly greater, which means that the speed should be higher.

Apart from that, the company money flow influences significantly the costs of adjustment;

- *if a company has great positive cash flows* the latter may become a moderately priced source of share repurchase which in its turn reduces significantly the costs of the financial leverage optimization;
- *in the case of negative cash flows* a company faces the necessity of their financing.

Therefore, it is of great importance to study the influence of the ratio of the deviation value to cash flows of the company on speed of adjustment to the target capital structure.

The results of the evaluation of the partial adjustment model taking into consideration the value of deviation of the capital structure from the target value and the amount of cash flows of the company (model 12) are represented in table 6. For the model on the basis of the balance sheet financial leverage a higher value of corrected determination coefficient for the debt value above the target value and on the basis of the market leverage for the capital structure below the target value was obtained. Therefore, we'll use as a basis for the debt level above the target value the results on the basis of the balance sheet financial leverage and for the debt value below the target value – the results on the basis of the market leverage.

If the existing capital structure exceeds the target value and the company does not have sufficient cash flows to eliminate the discontinuity in the capital structure (case *Overlap* $|Dev| > |CF|$ and *ExcessDev*) the company does not approximate the target capital structure as a result of share repurchase, but on the contrary, moves away from it (the debt value increases): the total speed of adjustment in this case amounts approximately to -20% . However if the company has a significant value of cash flows which exceed the value of deviation from the target capital structure (case *Overlap* $|CF| > |Dev|$ and *ExcessCF*) as a result of share repurchase, a significant adjustment to the target value takes place. The fastest actors re: the

speed of adjustment are those companies within the deviation amount from the target value and those for whom, at attaining the target value, the company's capital structure shows practically no changes. On the other hand, if the real capital structure of the company is below the target value then, as a result of repurchase, the speed of adjustment achieves high values in both cases: approximately 56% in case of a small value of the company money flow and 65% in case the money flow in excess of the value of deviation of the capital structure from the target value. Consequently, in this case share repurchase is advantageous for companies with any value of their cash flows.

Table 6. Evaluation of the influence of the value of deviation of the leverage from the target value and sufficiency of money flow aimed to cover it on the speed of adjustment to the target capital structure of the companies from BRICS countries

	Balance sheet leverage, BLEV		Market leverage, MLEV	
	Debt above the target value	Debt below the target value	Debt above the target value	Debt below the target value
<i>Const</i>	-0.0287^{***} (0.0025)	0.03062^{***} (0.0021)	-0.0954^{***} (0.0126)	0.0778^{***} (0.0073)
<i>ExcessDev</i>	-0.5651^{**} (0.2308)	0.2298^{**} (0.1038)	-0.1317 (0.1803)	0.5439^{***} (0.1597)
<i>Overlap</i> $ Dev > CF $	0.3939 (0.3117)	0.2359 (0.1439)	1.1958 (0.7761)	0.5859 (0.3974)
<i>Overlap</i> $ CF > Dev $	0.6049^{***} (0.2060)	0.1817^{***} (0.1650)	1.5133^{**} (0.7576)	0.6455^{**} (0.3036)
<i>ExcessCF</i>	0.1519 (0.0428)	-0.0273 (0.0659)	0.2287 (0.3556)	-0.1571 (0.1121)
R^2	0.73	0.58	0.65	0.70
Correct. R^2	0.55	0.46	0.49	0.50
N	1,276	1,474	1,118	1,907

Note: results of evaluation using combined OLS. In the brackets under the values of ratio the value of standard error is indicated, *** corresponds to the level of significance in 1%, ** - 5%, * - 10%.

Source: on the basis of the authors' calculations.

On the basis of the results of the evaluation of the model we can make a conclusion that the *money flow of companies from BRICS countries exerts a significant influence on the speed of adjustment as a result of share repurchase*. When the value of discontinuity of the existing leverage against the target value exceeds the absolute value of money flow (i.e. when $|Dev| - |CF| > 0$) the companies strive to cover the discontinuity value quicker within the amount of their money flow and the rest amount is covered at a much slower speed. At the same time the companies with the money flow exceeding the value of deviation of the

capital structure from the target value have the biggest values of the speed of adjustment as a result of share repurchase, consequently **hypothesis 4 is confirmed**. It is important to note that for the companies with the existing capital structure above the target value share repurchase is an effective instrument for correction of the capital structure only in case of existence of significant money flow in the company.

The main results obtained at all stages of the empiric study are represented in fig. 8.

Figure 8. Results of the Empirical Study

The most significant determinants of the target capital structure	Evaluation of the speed of adjustment as a result of share repurchase	The most significant determinants of the speed of adjustment of the capital structure when repurchasing shares
<ul style="list-style-type: none"> Return on capital of the company Opportunities for growth of the company Share of the company tangible assets Degree of the company business risk Economic growth Inflation rate 	<ul style="list-style-type: none"> Speed of adjustment - 41-50% for balance sheet values; 44-80% for market values of the leverage Speed of adjustment is higher when the financial leverage is below the target value Companies with money flow above the discontinuity value in the capital structure have the highest speed of adjustment 	<ul style="list-style-type: none"> Company size Company opportunities for growth Share of repurchased stocks Economic growth Inflation rate

Source: on the basis of the authors' calculations.

Algorithm of attainment of the Target Capital Structure using Share Repurchase

On the basis of the undertaken research we can offer the algorithm which would help the companies in practice to manage the capital structure efficiently using share repurchase. The offered algorithm is divided into the following stages:

- 1) Defining the company need in change of the existing Capital Structure** in accordance with its current short-term and long-term objectives.
- 2) Analysis of the company internal characteristics and the state of external economic environment.** On the basis of the undertaken research we have found out that for major companies with great opportunities for growth, share repurchase is the most profitable instrument of capital structure correction. However, if the company is not large enough but at the same time it has high opportunities for growth (for example, IT companies) share repurchase may also be a very effective instrument. Apart from that, it is necessary to assess the current macroeconomic status: if in the current period high rates of growth and low rates of inflation are typical of the country it is a favorable moment to carry out the share repurchase procedure in order to correct the capital structure.
- 3) Analysis of the current state of the Capital Structure.** It is necessary to calculate the target value of the capital structure by formula (2) or to use an industry average value or the value of the financial leverage of the industry leader:
 - if the current capital structure of the company is above the target value*, then in accordance with the undertaken research the speed of adjustment of the capital structure to the target value in general is not high (approximately 26%). A significant influence on the speed of adjustment in this case is exerted by the amount of cash flows of the company: if the company has significant cash flows exceeding the deviation of the actual capital structure from the target value in this case the speed of adjustment may attain 60%;
- 4) Calculation and comparison of prospective costs and benefits from Share Repurchase:**
 - if the current capital structure of the company is below the target value* then in accordance with the undertaken research this state is favorable for correction of the capital structure using share repurchase: the speed of adjustment may attain 61% during a period.
 - if the current capital structure of the company is close to the target value* the benefits from share repurchase in order to optimize the capital structure may be less than the costs incurred by the repurchase;
 - if the company is significantly far from the target value* the benefits from optimization are more than costs, and consequently share repurchase is justified from the point of view of the capital structure management policy.
- 5) Defining characteristic features of Share Repurchase:**
 - amount and form of repurchase.* If a company intends to significantly alter the capital structure it has to repurchase a large amount of shares. For these purposes the following forms of repurchase will suit: purchase of a fixed number of shares at a fixed price, share repurchase using the Dutch auction, and direct agreement with shareholders. Alongside this, from the point of view of transaction costs, share repurchase in an open market is the least expensive option because it does not necessitate negotiations or a search for the best offers. Consequently, if the

prospective expenses from share repurchase are critical for the company in this case we recommend repurchasing shares in an open market;

- *financing method.* If a company has high positive cash flows they may be a moderately priced source of share repurchase, thus reducing the costs of the financial leverage optimization significantly. If the company has chosen debt financing to carry out share repurchase the management has to evaluate the financial status of the company after the repurchase more thoroughly as long as high values of the financial leverage increase the risk of the company insolvency, and this may affect adversely the company goodwill and to cause reduction of price for shares as well as.
- 6) **Share repurchase and correction of the Capital Structure.**
- 7) **Analysis of the effectiveness of correction of the Capital Structure using Share Repurchase.** As long as we presume that attainment by the company of the target capital structure within share repurchase is important to financial management, it is necessary for an evaluation of effectiveness to define the value of deviation of the actual capital structure after share repurchase from the target value and to compare to a similar value before the repurchase procedure. If the discontinuity has shortened we can consider that the correction has succeeded. In this case, it is reasonable to evaluate the company solvency indicators in order to make sure that the company financial status has not become worse as a result of share repurchase.

Thus, implementation of this algorithm will help to ensure a maximally successful and profitable share repurchase for the companies which set as their objective the correction of the capital structure towards the target value.

Conclusion

The capital structure is one of the key parameters of company management. An efficient policy of capital structure management helps the company to increase its value. Share repurchase is a phenomenon which has not been studied entirely as regards its influence on the capital structure. As such, the companies engaged in share repurchase should understand the consequences of this remedy including the consequences for the shareholders' welfare. That is why this subject is of relevance both from the point of view of science and practice.

In this paper, on the basis of a selection of public companies from BRICS countries in the period of 2005 to 2015 using 670 cases of share repurchase, we obtained the following new results. First, it was confirmed that as a result of share repurchase by companies correction of the actual capital structure towards the target value takes place (on average, in the selection the speed of adjustment amounts to 43%, and for Russian companies the speed of adjustment is higher and amounts to approximately 50%).

Second, the nature of deviation of the capital structure from the target value significantly influences the speed of adjustment: underleveraged companies approximate the target capital structure at a significantly higher speed than companies with an excessive debt load (29 against 57%). Third, the amount of the company money flow influences significantly the speed of adjustment: if the existing capital structure of the company exceeds the target value the speed of adjustment of the capital structure to the target value as a result of share repurchase is rather low (approximately 26%) but if the company has significant cash flows exceeding the deviation of the actual capital structure from the target value in such case the speed of adjustment may attain 60%. However, if the current capital structure of the company is below the target value, the speed of adjustment attains high values in both cases: approximately 56% in case of a small money flow of the company and 65% when the money flow exceeds the value of deviation of the capital structure for the period (in our case – one year). It should be noted that in earlier studies there were no conclusions on such dependencies.

The algorithm offered by the authors, which has been developed on the basis of the research results, should help companies to more effectively manage capital structure in practice using share repurchase. Management of the company capital structure is a complex and multiple-stage procedure. In order to make the company achieve the best results during the share repurchase a thorough analysis of both the exterior macroeconomic environment and inner characteristics of the company itself is necessary.

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Financial and Institutional Determinants of Cash Holdings in the Oil and Gas Industry

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Abstract

At the same time that a dramatic plunge in energy commodities pressured companies in the energy sector to initiate a down-cycle drill by cutting capital expenditures, selling non-core assets, and laying off personnel, the world's top producers still maintained over half a trillion dollars in liquid assets. The reasons for phenomena such as this in the global oil and gas sector are manifold. The research question for this composition is: What are the determinants, both financial and institutional, which drive oil and gas companies to hold a certain amount of cash on their balances? This paper aims to analyse these determinants in various geographical markets of the European continent over the period of 2010-2014, using models derived from both the 'tradeoff' theory and the 'pecking order' theory. The empirical results from 800 firms were acquired with panel data regression analyses. They suggest that cash holdings in the sector are negatively affected by the net working capital, leverage, collateral, and firm size, while cash flows and capital expenditures have a positive influence on cash reserves. Besides the financial determinants, we also studied the institutional determinants for the cash levels. Our findings offer evidence that firms in countries with strong governance (as measured by the World Governance Index) hold more liquidity. Furthermore, the state of financial market development (as measured by the Global Financial Centers Index) is also positively related to cash holdings with the consequence that the financial market effect dominates the influence of governance. Our empirical evaluation will be of concern to managers in the oil and gas sector, who should take into consideration the settings of their companies when making corporate cash policy choices.

Keywords: oil and gas companies, cash holdings, financial determinants, institutional determinants

JEL: G30, Q40

Introduction

During the Global Financial Crisis of 2007–2008, Warren Buffett made an emphatic public declaration from the widely read opinion pages of *The New York Times*. He warned the public that by holding cash it “opted for a terrible long-term asset, one that pays virtually nothing and is certain to depreciate in value” [New York Times, 2008]. Interestingly enough, at the end of 2015, non-financial S&P 500 companies held \$1.44 trillion in cash on their books [MarketWatch, 2015] and ever since the financial crisis, the record high cash holdings of American firms have been attracting significant media attention [Pinkowitz et al., 2013]. In continental Europe, the energy, automobile, telecom, and utility industries were the greatest liquidity hoarders holding €490 billion [FT, 2015].

In a world of perfect capital markets, a firm does not have the need to hold any cash at all, since it can obtain funding for its profitable investment projects at negligible transaction costs [Modigliani, Miller, 1958]. Thus, cash is merely viewed as negative debt, and hence, there is no optimal cash holding level. However, many international studies demonstrate that companies maintain sizeable portions of their assets in cash. Ferreira and Vilela (2004) found an average cash ratio of 15%.

For the oil and gas sector, Antill and Arnott (2000) spotted the trend of increasing cash holdings early. They noted that the inability of the industry to reinvest all of its free cash at a required profit forced it to develop net cash on their balance sheets. Even though a dramatic plunge in energy commodities pressured companies in the sector to initiate a down-cycle drill by cutting capital expenditures, selling non-core assets, and laying off personnel, the world's top producers still had over half a trillion dollars in liquid assets at the end of 2014 [Bloomberg, 2015].

Due to the importance of liquidity and its significant role in corporate financial management, various empirical studies have been conducted to explore the factors that influence it. The U.S. studies of Opler et al. (1999) and Kim et al. (1998) lend credence to the tradeoff theory, suggesting an optimal liquidity level that results from equalizing the marginal benefits of cash holdings to their marginal costs [Von Eije, 2012]. Firms increase their cash balances with business risks, capital expenditures, and financial market access constraints, while firm size, leverage, and dividend payments reduce cash holdings. The pecking order theory [Myers and Majluf, 1984] puts forward the contentious conclusion of zero target cash levels, viewing liquidity as a cushion between retained earnings and investment necessities. To decrease their financing costs, companies fund new projects primarily with retained earnings, then with safe debt and risky debt, and lastly with equity. Having ample operational cash flows at their disposal to finance their investments, a firm repays debt and accumulates cash.

Recent studies using international samples have explored the relationship between cash holdings and countries' institutional differences, as well as the level of financial market development. The vast majority of these studies

[Dittmar et al., 2003; Ferreira and Vilela, 2004] have confirmed the tradeoff theory and presented evidence that in countries with superior investor protection and a high quality of law enforcement companies tend to carry fewer liquid assets. However, there are some contradictory results concerning the extent of the financial market development, as Ferreira and Vilela (2004) found that a higher level of financial development correlates with a negative impact on cash holdings, while Dittmar et al. (2003) observed a positive impact.

Although corporate cash holding determinants have been the subject of many studies, scholars have predominantly focused on U.S. firms, while the empirical evidence of companies from various regions in Europe is not voluminous. Additionally, it is not certain that acquired outputs can be generalized according to specific business sectors, since most previous studies are made across a number of various industries. This point highlights the importance of a sample selection. The selection from the oil and gas industry is particularly relevant, since this sector has been the world's primary commercial energy supplier for many decades and is believed that its leading role will be preserved in the years to come [EIA, 2017]. Therefore, due to the magnitude of the industry, its unique nature of extensive investments, and a notable need for external capital, we aim to provide new insights regarding the drivers of corporate cash holdings and whether this trend of money pileup in energy companies can be explained.

We reevaluated the relation between cash holdings, a country's institutional settings and the state of financial market development using a sample of 800 listed and unlisted energy firms from various geographical markets from the European continent, considered over the period of 2010–2014. The underlying research question is: What are the determinants, both financial and institutional, which drive oil and gas companies to hold a certain amount of cash on their balances? This paper contributes to the limited research on cash-holdings in the oil and gas sector. As opposed to many previous studies that support a tradeoff view, our findings confirmed that both the tradeoff and pecking order models are essential in explaining the determinants of corporate cash holdings. We show that companies from the oil and gas sector in countries with a stronger institutional framework and developed financial markets hold more liquidity when compared to firms operating in countries with weaker governance regimes. We also find that the level of capital market development is positively related with cash holdings, indicating that oil and gas companies hold more cash when they can do so.

The structure of the article proceeds as follows. Section 2 highlights the underlying financial theory and arguments as to why a company may opt to hold cash. Section 3 introduces the methodology and the data sample. Every variable deployed was given a detailed description, as well as an explanation regarding the applicability of the selected variables to our study. Section 4 presents the empirical findings. Section 5 summarizes the results and suggests directions for further empirical research.

Theoretical framework

In the following section, we present the prevailing theories on corporate cash holdings. As there are numerous and sometimes contradictory financial ideas on the matter, we limit the scope of this review to our underlying assumptions about the topic. We begin by featuring some financial theories, then proceed to elaborate on the possible reasons for holding cash, and lastly, we present some outlines of recent research.

Theory and empirical hypotheses

Irrelevance of cash holdings

In a world of efficient capital markets, there is no incentive to hold any liquidity as, once needed, it can be drawn from markets without hindrance and at a reasonable price [Opler et al., 1999]. Consequently, in the absence of a liquidity premium, cash holdings have no opportunity cost and do not maximize shareholder wealth. According to the classic Modigliani-Miller theory, the market value of a company has no dependence on its financing structure. In a world of perfect and frictionless capital markets, firms are always able to secure funding for their present positive net value projects so cash reserves are irrelevant. In practice, companies operate in imperfect markets and as a result, there are valid reasons for why they may opt to carry liquidity on their balance sheets and not consider external financing as a perfect substitute for internal ones.

Tradeoff theory

According to the tradeoff theory, companies establish their optimal level of liquidity by weighing the marginal costs and benefits of holding cash [Ferreira and Vilela, 2004]. The primary cost associated with cash holdings is frequently called the cost-of-carry and results from an inferior return relative to other investments of the same risk. The benefits of having ample liquidity balances arise from two motives: transaction cost concerns and precautionary intent [Dittmar et al., 2003].

Tobin (1956) found that corporate cash balances are dependent on the transaction costs that a company is exposed to while converting non-cash financial assets into cash. Due to the economies of scale, large firms carry less liquidity. Later, Mulligan (1997) confirmed that big companies tend to hold less cash as a percentage of sales compared to small companies. The transaction cost motive also considers the charges for obtaining external financing. In the presence of a liquid asset shortage, a firm will have to choose between various options: dividend and investment reduction, asset sale or borrowing funds in capital markets, with the latter being the more preferred choice [Opler et al., 1999]. The expenses attached to accessing the financial market prompt the company to resort to external financing less often and to hold an optimal amount of cash as a buffer [Kim et al., 1998]. Companies with better investment prospects are assumed to be in possession of larger liquid reserves in order to pursue the optimal investment policy and therefore the

level of capital spending should be positively related to cash balances (Dittmar et al., 2003). Bates et al. (2009) pointed to the substitution effect of working capital due to its relatively simple and quick transformation features: firms with large numbers of working capital tend to have less cash.

The precautionary motive is regarded as a preventative measure against unforeseen circumstances. The mitigation of the costs of financial distress compels firms to hold ample funds in terms of liquidity and in readily available lines of credit. Opler et al. (1999) highlight the advantage of keeping a portion of capital in the form of liquid assets, since it helps avoid passing on profitable projects due to a liquidity shortage.

Pecking order theory

Numerous market imperfections increase the costs of external financing. Donaldson (1961) observed the substantial inclination of management towards internal generation as a source of new funds. In case the need for external financing prevailed, management seldom turned to issuing equity, regarding debt as a more preferable option. As an extension, Myers (1984) and Myers and Majluf (1984) set the framework in the context of the rational expectation equilibrium. Since a seller exercises an informational advantage over a buyer, in the absence of all integral information regarding the state of the firm, the providers of capital will demand a premium for investing in or granting credit to an entity. Thus, to minimize asymmetric information and other financing costs, management will give preference to retained earnings first, then to debt, and lastly to equity.

Such a hierarchy of financial policies gained widespread recognition as the pecking order theory. Presented with sharp adverse selection costs, a company might pass on accepting value-creating projects, because it will not prove able to raise the necessary funds. As a viable response to this scenario, aiming to circumvent adverse selection costs and to not pass on positive NPV projects, a firm may choose to bulk up its financial slack (Myers, 1984). For oil companies, Chen (2016) provides evidence of a “pecking order” existing in relation to cash flows. Firms that are constrained primarily deploy their cash flows for the accrualment of cash reserves, while unconstrained firms direct their cash flows towards discharging liabilities and arranging a share repurchase program once positive cash flow shocks occur.

Institutions and macroeconomic exposure

Scholars have started focusing more on how formal and informal institutions, called “rules of the game”, are influencing the organizational and commercial behaviour of companies [North, 1991; Scott, 2014]. Drawing on original research, Acemoglu and Robinson (2012) argue that inclusive political institutions provide incentives for capital investments and economic growth. According to Bushman and Piotroski (2006), political and legal systems substantially contribute to company activity.

Bae and Goyal (2006) showed that the protection of creditor and property rights largely decreases the costs of raising funds from banks. Extending credit in economies with underdeveloped governance constitutes a significant expropriation threat, which ends up contracting the local credit distribution [Seifert and Gonenc, 2016]. Thus, strong country governance with a widely recognized rule of law and vigorously pursued creditor rights promote lower liquidity holdings within firms, while in riskier economies, companies would opt to hold more cash as a safeguard against adverse shocks [Pinkowitz et al., 2006].

Determinants of cash holdings

Financial determinants

Collateral is pledged against a loan in order to secure financing. Von Eije (2012) suggests that the manufacturing characteristics of a firm are likely to serve as collateral for debt issues. Berger and Udell (1998) point out that creditors often expect riskier borrowers to provide security for their loans. Covered loans to the oil and gas industry are deemed to be less risky compared to unsecured bonds, which could bring near-complete losses [Bloomberg, 2016]. Firms in possession of low collateral value assets are up against significant challenges in sourcing an external finance supply, forcing companies to reserve liquidity. Thus, we expect to find a negative link between cash holdings and collateralizable assets.

A company's cash holdings could be regarded as retained historical cash flows. Given the volatility of moderate cash flow, a high, current cash flow should translate to relatively high cash holdings, yielding a positive relation between the two. Additionally, according to the pecking order theory, companies will resort to internally generated funding before going to the external capital market. Therefore, large cash flows will be consistent with higher cash holdings, as confirmed by Opler et al. (1999). However, Kim et al. (1998) argue that cash flow provides an additional source of liquidity, viewing it as a cash substitute. Therefore, the relation should be negative. Consequently, the estimated relationship between cash holdings and cash flow is ambiguous.

Seifert and Gonenc (2016) found that company size holds an inverse relation to cash holdings, since larger firms are more predisposed to easier borrowing terms and effectively are spared from keeping excessive liquidity. Larger firms display fewer articulate information asymmetries and lower adverse selection costs since they are generally well developed, have established disclosure procedures, and capture more of market's attention. In addition, due to the economies of scale in obtaining external capital, smaller firms face higher financing costs prompting them to hold more liquidity [Ozkan and Ozkan, 2004]. Moreover, larger firms tend to be more diversified and thereby experience lower risk of going into financial distress, supporting the idea that smaller firms should hold more cash [Titman and Wessels, 1988]. Thus, we may assume the expected impact of firm size on cash holdings to be negative.

The fundamental advantage of corporate liquidity is its function as internal funding for value creating projects. In a pecking order environment, debt is expected to increase within a company when investment surpasses the retained earnings and to decrease when investment is less than the retained earnings. Ferreira and Vilela (2004) suggest that cash holdings should correspondingly adhere to an inverse dynamic. Cash balances are reduced when investments exceed the retained earnings and rise once investments are less than the retained earnings. In this manner, such a notion justifies the assumption of an inverse relation between cash and leverage. In much the same way, Kim et al. (1998), Opler et al. (1999) and Ozkan and Ozkan (2004) also lend credence to an inverse relation between leverage and cash holdings considering that companies can issue debt to generate cash when internal funds are small. However, this indebtedness also increases the probability of financial distress, forcing the accumulation of liquid resources. This could be viewed as a hedging tool [Acharya et al., 2007], which leads to a positive impact. Hence, the estimated relationship between cash holdings and leverage is ambiguous.

In an environment of volatile oil prices, tighter regulations and intense pressure from shareholders, oil and gas companies have been focusing meticulously on cash and working capital management by aiming to increase returns and to deliver a satisfactory cash flow to support investments and dividends [EY, 2014]. Working capital aids the industry by tapping into valuable liquidity resources and the optimization of this working capital is able to unlock the cash to support itself and invest for the future [PwC, 2015]. Opler et al. (1999) found that net working capital may serve as a substitute for cash and could be readily and relatively efficiently converted into liquidity once the need arises. Therefore, we expect to observe negative relations between the liquid asset holdings and net working capital.

Previous studies on cash holdings have shown mixed results regarding capital outlays. For instance, Mikkelsen and Partch (2002) found that high cash reserves are accompanied by greater investments, while Kalcheva and Lins (2007) observed companies with larger capital expenditure holding less liquidity. In general, the tradeoff theory predicts a positive relationship between capital expenditures and cash holdings, since firms increase their cash balances to finance capital expenditures, while the pecking order theory suggests a negative relationship as companies primarily finance their investment projects with accumulated cash [Dittmar et al., 2003]. Therefore, the relation between capital expenditures and liquidity reserves is equivocal.

Institutional determinants

Strong governance ensures better property right protection by enforcing business contracts and it also improves lenders' confidence, as the probability of loan repayment and collateral repossession increases [Ayyagari et al., 2010]. Sound governance regimes contribute to lower

liquidity holdings within firms by reducing uncertainty [Seifert and Gonenc, 2016], while in riskier economies, companies tend to reserve liquidity as a precautionary measure [Pinkowitz et al., 2006]. Consequently, we expected to find a negative relationship between the quality of a country's institutional framework and the cash holdings of companies.

For the industry, access to developed financial markets is of prominent importance. Even at times when the oil price was above \$100 per barrel, major oil firms routinely needed to raise capital to cover their outlays [WS], 2015]. Besides internal actions to raise liquidity, whether through capital expenditure cuts, reductions in dividend distributions and headcount contraction, energy firms regularly turn to external sources via debt or equity offerings. According to Brogan (2015), small-cap explorers usually resort to equity issuance, whereas midcap to large-cap independent oil and gas producers are the largest users of reserve-based lending facilities from banks. Big

international oil firms heavily rely on the support from banks, infrastructure funds, pension funds, and other institutions.

Fewer developed financial markets provide a limited credit supply and higher transaction costs for obtaining additional financial resources, which ultimately results in firms hoarding more cash [Ferreira and Vilela, 2004]. Better access to finance decreases the marginal value of cash, reducing the necessity to hold a large amount of precautionary liquidity [Faulkender and Wang, 2006]. Therefore, we expected to observe an inverse relationship between cash holdings and country's capital market state. However, as noted by La Porta et al. (1997), countries with strong governance mechanisms, as indicated by the legal framework and quality of law enforcement, have better developed financial markets. Thus, we employed models that assess the impact of both factors on cash holdings and allow the comparison of their role in explaining cash reserves. See Table 1 for a summary of the above.

Table 1. Determinants of Cash Holdings

Variable	Relation with cash holdings	Explanation
Firm size	Negative	Economies of scale, financial constraints
Collateralizable value of assets	Negative	Ease of securing credit
Cash flow	Negative/Positive	Ready source of liquidity/ Preference for financing with internal sources
Leverage	Negative/Positive	Increased funding costs/ Avoidance of financial distress
Financial market development	Negative	Ease of access to external financing
Country governance	Negative	Uncertainty reduction
Capital Expenditures	Negative/Positive	Decrease of internal funds/ Investment support
Net working capital	Negative	Source of additional liquidity

Hypothesis development

In view of the above, we constructed hypotheses related to corporate cash holdings that were subsequently tested and analyzed. Cash holdings in the oil and gas industry were estimated by applying the factors found to influence the cash policies of non-energy companies: collateralizable value of assets, cash flow, firm size, leverage, country governance, capital market development, and net working capital. We will use these explanatory attributes as proxies for the determinants of cash holdings.

H1: Corporate cash holdings are inversely related to firm size

H2: Corporate cash holdings are inversely related to the firm's collateralizable assets

H3: Corporate cash holdings are inversely related to the firm's cash flow

H4: Corporate cash holdings are inversely related to firm leverage

H5: Corporate cash holdings are inversely related to the firm's net working capital

H6: Corporate cash holdings are positively related to the firm's capital expenditures

H7: Corporate cash holdings are lower in countries with strong governance

H8: Corporate cash holdings are lower in developed financial markets

Methodology and data collection

In this section, we describe the dataset that was used as well as our variables and methodology. We bring into focus the quantifiable observations that can be examined statistically and produce solid generalizations.

Sample and Data

In order to carry out the practical part of the research, we collected secondary data from the ORBIS database, compiled by the Bureau Van Dijk. The database includes information on firms around the world, derived from their annual financial statements. In a few particular occurrences, we used primary data obtained directly from the annual reports. The sample includes listed and non-listed oil and gas companies (NACE codes 061, 0610, 06, 0620, 091, 0910, 495, 4950, 3523) from 33 European countries between the years of 2010-2014. Companies that relocated their nominal registration to other jurisdiction or subsidiaries of foreign firms were excluded. The countries that are presented vary in their institutional and economical aspects. Some were left out as companies from a sector that were lacking in some aspect.

After the corresponding criteria were applied, we proceeded to do a panel construction consisting of 800 firms representing 4,000 firms in total from yearlong observations. The sample firms meet the following criteria: (a) they possess more than \$20 million in total assets; (b) have a turnover of more than \$1 million; and (c) hold more than \$0.5 million worth of cash reserves. Predominantly, we needed variables such as the total assets, tangible assets, working capital and cash holdings to be positive, as well as any other variable defined as positive. The data covering the governance issues was acquired from the World Bank World Governance Index website and the information on the capital market from the Z/Yen Group and their Global Financial Centers Index.

As a measure of country-level governance, the World Governance Index (WGI) aggregates six key dimensions

of governance: Voice and Accountability, Political Stability, Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. The Global Financial Centers Index (GFCI) was obtained from a publishing agency website. This index encompasses two blocks: instrumental factors and financial center assessments.

Instrumental factors consist of five broad areas constituting the competitiveness of a capital market: Business Environment, Financial Sector Development, Infrastructure, Human Capital, Reputational and General Factors. The World Bank, The Economist Intelligence Unit, the OECD and the United Nations provided these quantitative measures. Supplementarily, we involved other firm characteristics, which we anticipated would influence cash reserves.

Variable construction

Analogous with Ozkan and Ozkan (2004), we employed the variable CASH1, constructed as the ratio of cash and marketable securities to total assets. We also used the variable CASH2, which is identical to CASH1 except that the denominator is computed as the total assets minus the cash and cash equivalents [Opler et al., 1999]. Higher values of these variables will denote higher levels of liquidity within the company. Similarly to Titman and Wessels (1988), we used two proxies for size: SIZE1 was estimated as the natural logarithm for sales and SIZE2 as the natural logarithm for total assets. Capital market development (GFCI) was calculated by considering data from The Global Financial Centers Index. For leverage (LEV), we used the total debt to total assets. We measured capital expenditures (CAPEX) as capital expenditures to total assets. Net working capital (NWC) was estimated as the net current assets minus cash. Cash flow was considered as the pre-tax profits plus depreciation over sales (CF1) or total assets (CF2). Collateralizable assets (COLL) were a proxy for the collateral firm's need to secure the loan and were calculated as tangible assets over total assets. The measures of the country institutional framework characteristics (WGI) were governance scores obtained from the World Governance Index. For more on the definitions of the variables mentioned see Table 2 below.

Table 2. Description of Variables

Name	Definition
Cash holdings (CASH1)	Cash + Marketable securities/Total assets
Cash holdings (CASH2)	Cash + Marketable securities/Total assets – (Cash + Marketable securities)
Size (SIZE1)	ln (Sales)
Size (SIZE2)	ln (Assets)
Leverage (LEV)	Total debt/Shareholders equity
Cash flow (CF1)	Pre-tax profits + Depreciation/Sales
Cash flow (CF2)	Pre-tax profits + Depreciation/Total assets
Net Working Capital (NWC)	(Working capital – (Cash + Marketable securities))/Total assets
Capital expenditures (CAPEX)	Capital expenditures/Total assets
Capital market development (GFCI)	ln (GFCI)
Collateralizable assets (COLL)	Tangible assets/Total assets
Institutional Governance (WGI)	ln (WGI)

Regression model specification

Since the data in our research encloses both time series and cross-sectional elements, the particular set of data would be known as a panel of data. We ran regressions with country-fixed effects, institutional framework characteristics, and the rating of the largest and nearest financial center respectively. Our final regressions employed both of the macro-level factors. All models were estimated using OLS regressions with the Huber-White-Sandwich robust variance-covariance estimator (VCE). The standard errors reported are robust to cross-sectional heteroscedasticity and within-panel serial correlation.

Empirical findings

Descriptive statistics

Table A1 in the appendix presents the descriptive statistics for cash holdings on a country by country base. Summary statistics are presented below. The average values of a cash-to-assets ratio of 12% shown in Table 3 resemble those reported by Damodaran (2005) for U.S. oil and gas companies. The same goes for the mean leverage results (48%). Additionally, the variability of governance (WGI) and financial market development ratings (GFCI) in Table 4 are, respectively, a bit smaller and somewhat more variable over time.

Table 3. Descriptive statistics for firm-level variables

	Mean	Standard Deviation	Percentile 25	Median	Percentile 75	Valid N
CASH1	.12	.14	.03	.07	.15	4785
CASH2	.23	1.89	.03	.07	.18	4785
SIZE1	12.37	1.81	10.94	11.95	13.37	4785
SIZE2	12.36	2.17	11.18	12.35	13.51	4572
LEV	.48	.26	.28	.49	.66	860
CF1	-5.22	175.01	.01	.07	.23	3788
CF2	-.26	22.18	.04	.08	.15	3907
CAPEX	-.099	.133	-.151	-.085	-.039	672
NWC	.00	.26	-.09	.00	.12	4785
COLL	.32	.29	.03	.25	.55	4758

Table 4. Descriptive statistics for country-level variables

	Mean	Standard Deviation	Percentile 25	Median	Percentile 75	Valid N
voice_accountability	79.0	23.2	75.1	91.9	93.4	4785
Polstab	63.0	22.1	57.3	63.5	76.8	4785
Goveff	79.2	19.1	67.3	89.6	92.8	4785
Regqual	80.5	19.0	74.9	86.7	94.8	4785
Rulelaw	77.1	23.7	63.0	90.1	94.2	4785
Corrupt	74.2	26.7	58.1	90.0	93.4	4785
WGI	75.5	21.5	67.2	86.4	89.3	4785
GFCI	634.4	87.8	581.0	629.0	677.0	4767

Table 5. The effects of financial factors, WGI and GFCI on cash holdings

	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
	cash1	cash1	cash1	cash1	cash1	cash2	cash2	cash2	cash2	cash2
SIZE1	-0.00375**				-0.00512***	-0.0173***				-0.0247***
	(0.00180)				(0.00192)	(0.00622)				(0.00779)
LEV	-0.165***	-0.172***	-0.166***	-0.168***	-0.166***	-0.429***	-0.472***	-0.449***	-0.455***	-0.422***
	(0.0244)	(0.0257)	(0.0249)	(0.0306)	(0.0227)	(0.0793)	(0.0908)	(0.0858)	(0.107)	(0.0734)
CF1	-0.00000869***	-0.00000623*				0.0000212	0.0000308*			
	(0.00000321)	(0.00000363)				(0.0000154)	(0.0000177)			
NWC	-0.242***	-0.251***	-0.236***	-0.229***	-0.222***	-0.650***	-0.701***	-0.644***	-0.695***	-0.578***
	(0.0334)	(0.0345)	(0.0350)	(0.0409)	(0.0313)	(0.130)	(0.145)	(0.139)	(0.176)	(0.115)
COLL	-0.150***	-0.155***	-0.164***	-0.176***	-0.166***	-0.467***	-0.492***	-0.525***	-0.618***	-0.508***
	(0.0195)	(0.0198)	(0.0209)	(0.0252)	(0.0188)	(0.0874)	(0.0941)	(0.101)	(0.130)	(0.0820)
WGI	0.000212	0.000297	0.000264	0.000127	0.000183	-0.000976	-0.000475	-0.000553	-0.000903	-0.00105*
	(0.000207)	(0.000203)	(0.000203)	(0.000236)	(0.000207)	(0.000607)	(0.000509)	(0.000512)	(0.000635)	(0.000605)
GFCI	0.000128***	0.000116**	0.000115**	0.000145***	0.000141***	0.000697***	0.000637***	0.000627***	0.000783***	0.000706***
	(0.0000492)	(0.0000472)	(0.0000466)	(0.0000532)	(0.0000476)	(0.000208)	(0.000192)	(0.000189)	(0.000221)	(0.000188)
SIZE2		-0.00142	-0.00326**	-0.00557***			-0.00465	-0.0110**	-0.0154***	
		(0.00157)	(0.00163)	(0.00192)			(0.00400)	(0.00434)	(0.00554)	
CF2			0.0976***	0.113***	0.0851**			0.378***	0.404***	0.372**
			(0.0374)	(0.0380)	(0.0360)			(0.138)	(0.144)	(0.144)
CAPEX				0.157**					0.516**	
				(0.0609)					(0.238)	
Constant	0.211***	0.182***	0.202***	0.249***	0.225***	0.466***	0.309***	0.374***	0.463***	0.552***
	(0.0342)	(0.0351)	(0.0359)	(0.0419)	(0.0356)	(0.0958)	(0.0849)	(0.0871)	(0.110)	(0.110)
N	758	758	758	591	807	758	758	758	591	807
R²	0.261	0.258	0.267	0.317	0.281	0.158	0.154	0.162	0.195	0.167
adj. R²	0.254	0.251	0.260	0.308	0.275	0.150	0.146	0.154	0.184	0.160
AIC	-1184.3	-1181.7	-1190.5	-883.2	-1149.8	1013.3	1016.8	1009.6	903.3	1213.0
BIC	-1147.3	-1144.7	-1153.5	-843.8	-1112.3	1050.3	1053.8	1046.7	942.7	1250.5

Regression models

The standard errors in our first set of models are not seriously inflated by the collinearity among regressors. Adding CAPEX improves the models, but CAPEX is missing for some of the companies, which decreases the sample size. Country fixed effects were included into all the models, but are statistically significant ($p < 0.05$) only for the models explaining CASH1, and not for the models of CASH2. We found that some unobserved country-specific characteristics are able to influence CASH1, which points to the possibility of including institutional framework measures. We do so with the World Governance Indicators (WGI) as possible determinants. These indicators are highly correlated with one another. Consequently, similarly to Seifert and Gonenc (2015), we averaged them out across all six items. Controlling for firm characteristics, the WGI is significantly positively associated with cash holdings ($p < 0.01$). We cannot rule out the possibility of the presence of other country-specific factors such as certain laws and regulations that are difficult to account for in modeling. Indeed, we found that financial development does also matter.

Our further discussion will be based on the models that accounted for firm characteristics, governance characteristics and financial market development as presented in Table 5 below. It could be argued that the financial market ratings vary by year and thus, there may be some sort of variable bias that was omitted and was caused by not accounting for time effects. However, the parameter estimates for the last set of regressions with time-fixed effects and which were not shown demonstrate the robustness of our findings.

Regression results

Financial determinants

In line with Hypothesis 1, firm size (SIZE1 and SIZE2), denoted either as total sales or as total assets, has a negative coefficient with a varying significance, which is consistent with the idea that larger firms can access capital markets more easily and thus do not need to hold much cash. The negative relationship lends credence to the tradeoff argument, previously supported by Opler et al. (1999), Kim et al. (1998) as well as Seifert and Gonenc (2016). Smaller oil and gas companies with less operational flexibility have limited access to liquidity via public or private capital markets, while bigger energy companies are provided relatively easy access to cheap debt financing [Powell, 2015]. J.P. Morgan's (2015) research also attests that the size and scale of oil and gas companies are the key determinants of their credit quality. A larger size helps companies to move into higher rating categories and leads to better credit access.

The significant negative relationship between collateralizable assets and cash holdings confirms the evidence from a European study by Martínez-Carrascal (2010) confirming Hypothesis 2. Since the proportion of tangible assets in a firm's balance sheets is a variable linked to their access

to external finance, this negative relationship results in easier access to external financing when a company applies for a loan, which is largely in line with tradeoff arguments. For the oil and gas sector, reserve interests and operational cost intensive equipment help to establish the loan amount and steer the availability of funds. Therefore, oil and gas companies that have a strong balance sheet to incur debt at cost-efficient rates can effectively manage their capital agenda [Bloomberg, 2016].

Hypothesis 3 was rejected. We found a significant relationship opposite to what we hypothesized. Similarly to Ferreira and Vilela (2004), the sign of cash flow to the asset (CF2) coefficient was positive, which contradicts the tradeoff argument, but supports the pecking order theory. In line with Saddour's research on French firms (2006), cash balances increase along with cash flow levels, since companies can use their cash flow as a liquidity substitution for finance investments. Therefore, as with other companies, oil and gas firms primarily fund themselves internally with cash flow and externally with debt [J.P. Morgan, 2015]. Findings by Chen (2016) also suggest that oil companies build up cash reserves from cash flows. As noted by Gavrilenkov et al. (2013), oil companies have great influence over their cash management policy design and can fine-tune conditions to given circumstances to have a ready source of liquidity.

Our findings confirmed Hypothesis 4. Pursuant to Kim et al. (1998), Opler et al. (1999), Ozkan and Ozkan (2004) and Seifert and Gonenc (2016), leverage (LEV) significantly negatively impacts cash holdings, suggesting that highly leveraged companies resort to lower cash balances. The pecking order theory stipulates a negative relation between cash holdings and leverage: when investment needs outstrip their internal funds, firms issue new debt. In such a manner, once cash holdings fall, the leverage increases. Developments in oil and gas capital spending and production confirm this. Firms substantially increased their investment outlays in order to finance the expansion of production capacity and to facilitate new project development [EIA, 2016] that could not be financed entirely through internal funds.

In the results, the negative attribute of the NWC coefficients is similar to those documented in Opler et al. (1999) and Bates et al. (2009), which supports Hypothesis 5. It is consistent with the tradeoff model that regards working capital as a substitute for cash holdings, since such readily obtainable assets other than cash can be liquidated in the event of a liquidity shortage. Indeed, as reported by EY (2014), companies from the oil and gas sector have been progressively focusing their attention on cash and working capital management, in an attempt to increase the returns on capital and to deliver sufficient cash flow to support investments. There is a rising awareness of how much value is left out because of the previous small focus on working capital management and the firms have to operate in a lower surplus cash environment. Contrary to the observations of Kalcheva and Lins (2007), who found cash to be negatively related to capital ex-

penditures, the relationship was positive and significant in our sample, which is in line with Hypothesis 6. This suggests that oil and gas companies increase their cash levels in order to finance capital expenditures. Largely consistent with Mikkelsen and Partch (2002), the cash balances of energy companies should be sufficient to cover investment programs. This positive relation is consistent with firms who are building up a substantial buffer of immediately available liquidity for precautionary reasons.

Institutional determinants

We reported evidence that companies from the oil and gas sector in countries with a stronger institutional framework (WGI) hold more cash compared to firms operating in countries with weaker governance regimes. Therefore, we rejected Hypothesis 7, as the findings contradict our initial expectations and the empirical evidence of Dittmar et al. (2003) and Seifert and Gonenc (2016). The results are in line with Caprio et al. (2013), who also found a positive relation between government quality and corporate cash holdings. In a global sample, they found that quality governance governments tend to hold back from expropriation actions, and thus companies can hold more liquidity with less fear of government seizure. Conversely, consistent with the precautionary motive, companies tend to shelter cash holdings from expropriation by carrying lower cash balances and channeling liquidity into less exposed tangible assets. Iskandar-Datta and Jia (2014) also arrived at largely resembling findings.

Hypothesis 8 was also rejected, as we found the level of capital market development (GFCI) was positively related with cash holdings, which is contrary to Ferreira and Vilela (2004), but consistent with Dittmar et al. (2003). Oil and gas companies hold more cash in developed capital markets and liquidity balances do not seem to be determined by the failure to draw external financing. This behavior could be explained by precautionary reasons (Opler et al., 1999). Firms hold excess cash to ensure that they will retain the ability to invest when cash flow is too low, compared to investment requirements. The results also suggest that the financial market effect dominates the governance effect, meaning that cash holdings in this sector are clearly more sensitive to financial market development levels than to governance factors.

Conclusions

We explored the determinants of cash holdings for oil and gas firms in Europe, using panel data for the period of 2010-2014. We modeled the cash-to-asset ratio as a function of the company and country features. Similar to previous observations [Opler et al., 1999; Ozkan and Ozkan, 2004; Bates et al., 2009], our findings suggest that the cash balances held by oil and gas firms are negatively affected by firm size, the amount of liquid asset substitutes, as well as leverage and they also have positive relations with firm capital expenditures. These findings are largely in line with the tradeoff reasoning that the optimal level of cash

holdings is the result of firms stacking up the marginal costs against the benefits of carrying liquid balances.

This is primarily applicable in the oil and gas sector, where intrinsic forecasting challenges make holding a substantial buffer of immediately available funds of paramount importance. Consistent with Ferreira and Vilela (2004), and Saddour (2006), we found a positive relation between cash flow and cash holdings, which supports the pecking order theory. So we can assume that both the tradeoff and pecking order theories provide a valid interpretation of the determinants for cash holdings in oil and gas companies.

We provided evidence that firms in countries with strong governance hold more cash. This is in line with the findings of Caprio et al. (2013), who suggest that in countries with poor governance, firms shelter assets from state expropriation by keeping less liquidity, which is more vulnerable to expropriation than illiquid tangible assets (Myers and Rajan, 1998). The level of financial market development is positively related to cash reserves, with the financial market effect dominating the governance effect, which is likely to be indicative of the industry's immense appetite for capital.

With this contribution, we showed that managers should take into consideration the settings of their companies when making corporate cash policy choices. We look forward to promoting further research on cash holdings in oil and gas companies. It could be viable in future works examining whether the cash ratios of listed oil and gas companies significantly vary in comparison to those of their unlisted peers, as earlier evidenced by Von Eije (2012) for an international sample of manufacturing firms. Also, we have not explored whether the performance of oil and gas companies with large cash holdings differs from that of firms with lower liquidity balances. Therefore, analyzing the consequences of the high cash reserves of energy companies in an international setting is certainly a notable area for future research.

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APPENDIX

Table A1. Summary statistics by country: cash holdings

	cash1					cash2				
	Mean	SD	Perc. 25	Median	Perc. 75	Mean	SD	Perc. 25	Median	Perc. 75
AT (Austria)	0.149	0.129	0.052	0.11	0.206	0.21	0.23	0.055	0.124	0.259
BA (Bosnia-Herzegovina)	0.059	0.026	0.034	0.058	0.08	0.063	0.03	0.035	0.062	0.087
BE (Belgium)	0.13	0.106	0.049	0.089	0.184	0.17	0.176	0.051	0.098	0.225
BG (Bulgaria)	0.102	0.076	0.029	0.102	0.144	0.122	0.101	0.03	0.114	0.169
CH (Switzerland)	0.191	0.136	0.092	0.173	0.285	0.273	0.233	0.102	0.21	0.399
CY (Cyprus)	0.068	0.048	0.037	0.062	0.078	0.076	0.059	0.039	0.067	0.084
CZ (Czech Republic)	0.079	0.086	0.023	0.057	0.086	0.099	0.137	0.024	0.061	0.094
DE (Germany)	0.15	0.157	0.045	0.096	0.205	0.257	0.485	0.047	0.106	0.258
DK (Denmark)	0.146	0.047	0.111	0.144	0.149	0.174	0.067	0.124	0.169	0.175
EE (Estonia)	0.062	0.079	0.024	0.038	0.066	0.076	0.129	0.025	0.04	0.071
ES (Spain)	0.09	0.108	0.029	0.056	0.102	0.123	0.214	0.029	0.059	0.113
FI (Finland)	0.021	0.022	0.006	0.009	0.04	0.022	0.024	0.006	0.009	0.042
FR (France)	0.13	0.14	0.034	0.081	0.183	0.203	0.365	0.035	0.088	0.224
GB (Great Britain)	0.151	0.177	0.033	0.082	0.197	0.316	0.804	0.034	0.089	0.245
GR (Greece)	0.096	0.084	0.046	0.077	0.104	0.118	0.131	0.049	0.083	0.116
HR (Croatia)	0.048	0.045	0.015	0.029	0.073	0.053	0.054	0.015	0.03	0.079
HU (Hungary)	0.084	0.094	0.017	0.054	0.115	0.106	0.146	0.018	0.057	0.131
IE (Ireland)	0.172	0.24	0.025	0.072	0.225	0.989	3.105	0.026	0.077	0.29
IT (Italy)	0.087	0.115	0.023	0.048	0.098	0.321	4.883	0.024	0.05	0.109
LI (Liechtenstein)	0.236	0.067	0.221	0.267	0.277	0.316	0.107	0.284	0.363	0.382
LT (Lithuania)	0.073	0.05	0.038	0.057	0.1	0.082	0.063	0.039	0.06	0.111
LU (Luxembourg)	0.167	0.182	0.034	0.083	0.274	0.278	0.377	0.035	0.09	0.412
LV (Latvia)	0.112	0.081	0.052	0.088	0.127	0.136	0.119	0.055	0.096	0.146
MT (Malta)	0.02	0.005	0.017	0.018	0.022	0.02	0.005	0.017	0.018	0.022
NL (Netherlands)	0.151	0.156	0.031	0.089	0.234	0.235	0.325	0.032	0.098	0.306
NO (Norway)	0.117	0.147	0.019	0.06	0.155	0.21	0.567	0.019	0.064	0.184
PL (Poland)	0.108	0.101	0.037	0.06	0.162	0.138	0.158	0.039	0.064	0.193
PT (Portugal)	0.044	0.04	0.014	0.027	0.083	0.048	0.046	0.014	0.028	0.091
RO (Romania)	0.056	0.077	0.016	0.029	0.059	0.069	0.128	0.017	0.03	0.063
RS (Serbia)	0.033	0.04	0.003	0.015	0.061	0.036	0.045	0.003	0.015	0.065
RU (Russia)	0.079	0.095	0.017	0.042	0.108	0.103	0.172	0.017	0.044	0.121
SE (Sweden)	0.064	0.044	0.027	0.062	0.091	0.071	0.053	0.028	0.066	0.101
SI (Slovenia)	0.035	0.023	0.012	0.041	0.054	0.037	0.025	0.012	0.043	0.057
SK (Slovak Republic)	0.095	0.074	0.042	0.058	0.13	0.112	0.101	0.044	0.062	0.15
TR (Turkey)	0.151	0.173	0.02	0.077	0.229	0.267	0.498	0.02	0.084	0.297
UA (Ukraine)	0.08	0.087	0.015	0.053	0.124	0.099	0.131	0.015	0.055	0.141

Public-Private Partnership as a Challenge for EAEU Cooperation

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Abstract

In this article the author analyzes perspectives on the Eurasian Single Economic Space' concerning infrastructural investment projects. These perspectives are considered with a consideration of Public-Private Partnership (PPP) principles and the traditional framework of EAEU (Eurasian Economic Union) integration. The article examines national legal differences, such as the existence of regulations for PPPs, possible models for project realization and spheres where PPP could be used. The author also analyzes the characteristics of the most famous PPP projects in the EAEU.

The purpose of the article is to identify practical recommendations for the development of public-private partnerships to further cooperation between the EAEU countries.

This research stems from the study of international experiences of public-private partnerships, the adaptation thereof, and clarification of the necessary steps for the most efficient development of PPP in EAEU countries. As such, the following priority steps for EAEU countries are suggested:

- 1) EAEU countries should take steps to unite their respective legislative bases in terms of mutual compatibility so that public and private partners could act as inhabitants of the Union everywhere, removing not only customs barrier obstacles for them, but also additional tax restrictions;
- 2) EAEU countries should create an international council for problems and disputes pertaining to PPP which will include representatives of the countries of EAEU, representatives of the business and scientific communities and non-profit associations. Such a council was recommended to be set up at the United Nations during the third session of the United Nations Economic Commission for Europe on the problems of international public-private partnership, held in Geneva (Switzerland) on 18-19 April 2011;
- 3) EAEU countries should make use of practical experience in the implementation of interstate PPP projects. An example of a successful interstate PPP - the project for expansion and modernization of the international airport in Warsaw, through which more than 85% of all passengers of international flights have passed.

Keywords: EAEU, Public-Private Partnership, Eurasian integration, infrastructure investment

JEL: F02

Recently, more and more researchers are promoting the idea that the CIS in its existing form is an unviable structure and there are very few prospects for its development. But, there is another structure, the prospects of which are brighter: the Eurasian Economic Union (hereinafter - the EAEU). The EAEU was established in 2015 based on the Eurasian Customs Union and the Single Economic Space. The EAEU includes the following countries: Russia, Kazakhstan, Armenia, Belarus and Kyrgyzstan. This union is highly supported by the population of this community. According to the Center for Integration Studies of the Eurasian Development Bank, 78% of Russian respondents are in favor of the EAEU, 80% of respondents are in favor of EAEU in Kazakhstan, approximately 60% are in favor in Armenia and Belarus, and 86% view the EAEU favorably in Kyrgyzstan [7].

In the EAEU countries, economic development is primarily characterized by the consolidation of efforts of the state and private business. There is, however a significant level of interest in exploring new forms and methods of managing and regulating strategically important spheres of the economy. Although the EAEU countries are increasingly beginning to consider public-private partnership (hereinafter - PPP) as a means to solve their infrastructural problems, the PPP is a new concept, and, accordingly, there is a lack of practical experience with this form of cooperation. The countries of the EAEU that are at the initial stages of developing national strategies for investment in infrastructural projects (including in the form of PPPs), need to expand understanding, deepen knowledge, develop integration capacity and develop international cooperation and coordination at the inter-governmental level in the field of PPPs. It will allow them properly develop and implement their PPP development strategies.

The purpose of this article is to identify practical recommendations on the development of public-private partnership for cooperation of the EAEU countries.

At present, the issue of economic interaction between private business and the state is becoming especially urgent. One of the most effective forms of such interaction is a public-private partnership that allows the state to implement socially significant projects by sharing costs and risks with private investors.

One of the main properties of an ideal regional economic integration model is the formation of an intra-union market of about 300 million people. This amount of population is enough to ensure a minimum stable domestic demand to support production. In 2015, the EAEU, with an aggregate population of 179 million people did not reach this level and fell behind comparably large economies such as the EU (511.4 million people), the USA (318.9 million people) and China (1 billion 355.7 million people).

Further enlargement of the EAEU due to the accession of new members from among the former Soviet countries

is necessarily limited in quantitative terms. In the near future, Tajikistan is expected to enter the union with a population of 8 million, which is 4.5% of the population of the EAEU. The share of GDP in the all-union gross product is only 0.4%, which is 2,700 US dollars (compared with average 12,155 US dollars in the EAEU). Uzbekistan is on a par, with a similar GDP, and its population is 28.9 million. When Tajikistan, Uzbekistan, Moldova and Azerbaijan accede to the EAEU, the Union's population will increase by as much as 84.9 million people to 263.8 million, which is already 88% of the necessary market of 300 million people.

Nowadays, in the EAEU countries, the problem of deterioration of the infrastructure is more acute than ever. That indicates the need to implement socially significant infrastructural projects, including developing the framework for public-private partnerships (PPP). The Eurasian Development Bank (EDB) has already been successful in implementing PPP projects in Russia, (namely the reconstruction of the only air harbor of the Northern Capital - Pulkovo Airport, as well as the construction of the "Western High Speed Diameter" highway). Now, the EDB are planning some strategic development towards increasing the share of the EAEU countries in the PPP market. In these cases, the EDB acts as a lending institution. In May 2016, a memorandum on cooperation on the development of PPPs in the member states of the EAEU was signed [9].

The Eurasian Development Bank sees the creation and development of joint projects in the field of infrastructure as a primary goal. But the creation of infrastructure is a capital-intensive and extremely long process. Meanwhile, international organizations such as the European Bank for Reconstruction and Development, the International Finance Corporation, the European Investment Bank, the United Nations Economic Commission for Europe, the World Bank (through PPIAF, WBI) are also actively involved in these processes. Involving a private investor is, definitionally, also an integral part of this process. The mechanism of public-private partnership is used for successful implementation of joint projects in the field of infrastructure with the participation of public and private partners [3].

The decision of the Supreme Economic Council of May 29, 2014, No. 70 "On the basic guidelines of the macroeconomic policy of the EAEU countries" was to continue working towards the development of PPPs, in respect of the legislative framework of the member states and regulation of PPP mechanisms [12].

An example of successful implementation is a large-scale project for the construction of an international transit corridor (the "Western Europe-Western China" corridor), which is planned to be completed in 2015. It is 2700 km, and it passes through Kazakhstan, as well as Russia and Belarus, (which in 2012 joined the implementation of this project) [11].

Table 1. Regulatory framework and institutions for PPP development in the countries of the Unified Energy System

Russia	Republic of Belarus	Republic of Kazakhstan	Armenia	Kyrgyzstan
<ul style="list-style-type: none"> • The Law «On Concession Agreements» • Draft Federal Law on PPP • Draft procedure for conducting a competitive procedure for selecting a private partner • Recommendations for the regions on PPP development • Regional PPP standard. PPP development concept up to 2030 and PPP development roadmap • Coordinating Council for PPP Development under the Ministry of Economic Development of Russia • NP “Public-Private Partnership Development Center” 	<ul style="list-style-type: none"> • The Law “On Concession Agreements” • Draft law on public-private partnership • The law “On objects that are only in the ownership of the state, and types of activities for implementation, which are subject to the exclusive right of the state” • The Law “On creation of additional conditions for investment activity in the Republic of Belarus” • State program “Strengthening of National Potential in Applying PPP Mechanisms in the Republic of Belarus” • Center for PPP of the Research Economic Institute under the Ministry of Economy • Interdepartmental Infrastructure Council, coordinating the development of infrastructure facilities 	<ul style="list-style-type: none"> • The Law “On Concession Agreements” • Rules for the provision, review and selection of facilities that are possible for transfer to a concession • The rules for holding a tender for transferring an object to a concession • Typical contracts of concessions in various sectors of the economy • Draft law on public-private partnership • The Program for the Development of Public-Private Partnership in the Republic of Kazakhstan for 2011-2015. • JSC “Kazakhstan Center for Public-Private Partnerships?” 	<ul style="list-style-type: none"> • The concept of public-private partnership, developed by the Yerevan office. The United Nations Development Program, is currently the only formally adopted document in the field of PPPs 	<ul style="list-style-type: none"> • Law “On public-private partnership” • The Law “On Concessions and Concession Enterprises” • National Sustainable Development Strategy of the Kyrgyz Republic for the period 2013-2017.

Table 2. The main barriers to the development of PPP in the countries of the Unified Energy System

Russia	Republic of Belarus	Republic of Kazakhstan	Armenia	Kyrgyzstan
Imperfect federal Russian legislation, oversights include the absence of state guarantees for long-term state obligations	There is no institutional basis for public-private partnerships	The lack of a law that defines the general principles of PPP, the framework conditions of agreements of economic entities with local government, executive authorities	The concept of PPP, which took into account the most advanced world experience, which is currently the only officially accepted document in this field	There are no clear rules for the procedure for competitive selection of private partners
Absence of transparent and efficient procedures for selecting PPP projects	The system of interaction between power structures and business within the framework of PPP has not yet been created	Absence of necessary guarantees to ensure full coverage of investment and current costs of a private investor that has assumed the obligation to address these tasks		The rights and obligations of the parties to the partnership are not specified, the PPP project implementation models are not specified
The lack of enforcement mechanisms and mechanisms for punishment in the event of non-fulfillment by private partners of their contractual obligations		The change-of-leadership process in Kazakhstan itself is a barrier, along with the lack of continuity in the executive branch and a steady distrust of business and the public to all institutions of power		The fields of application of projects are not designated

Despite the implementation of joint PPP projects by the EAEU countries, at present they are at different stages of implementation of the PPP model (Table 1). However, at the same time, the gap in the pace of PPP development is gradually widening among the EAEU countries. An analysis of PPP practices in the EAEU region makes it possible to identify obstacles to the better functioning of the market. The primary issues are: imperfect legislation, lack of an institutional framework for PPPs, lack of transparent and efficient procedures for selecting PPP projects, and lack of guarantees for investment, each of which are vital to ensure full coverage of the investment and current costs of a private investor (Table 2) [4].

As the table below shows, the uneven development of PPP in the EAEU countries is due to the practical lack of international cooperation and coordination between them at the interstate level.

On January 1, 2016, the federal Law “On public-private, municipal-private partnership in the Russian Federation” (henceforth referred to as the ‘Federal Law on PPP of the Russian Federation’) came into force. This federal Law was the cause of much contention among interested parties, but also undoubtedly opened a new page in the history of public-private partnership in Russia. At the same time, disputes still persist in the field.

Private Sector participation in infrastructural projects in the Russian Federation (1990-2017yy.)

It may not be deemed overly controversial to state as a generality that Russia’s infrastructural projects have been known to fail rather often. Aside from this obvious disincentive for private parties to invest, Federal Law No. 115-FZ of 21.07.2005 “On concession agreements” (henceforth referred to as “the Federal Law on concessions”) facilitated implementation of one hundred separate projects. However, there is only one form of public-private partnership accommodated. Even a consolidation of the efforts of foreign investors would not allow the EAEU countries to access or utilize this and similar investment opportunities, especially since the idea of speaking on behalf of public partners from foreign countries does not require acknowledgement according to any of the applicable PPP Laws of the Russian Federation or the Federal Law on Concessions [2].

Private Sector participation in infrastructural projects in Kazakhstan (1990-2014yy.)

The relevant legislation of the Republic of Kazakhstan is noteworthy. This is primarily because the Law of the Republic of Kazakhstan of October 31, 2015 No. 379-V “On public-private partnership”, (which came into effect later than the Federal Law “On PPP of the Russian Federation”), appears to be much more progressive. For example, it does not disregard the agency or interest of foreign private partners. It opens a list of facilities for the implementation of public-private partnership projects.

Private Sector participation in infrastructural projects in Belarus (1990-2014yy.)

At the moment, the Republic of Belarus is clearly lagging behind in the sphere of public-private partnership. At present, Belarus lacks special legislation on public-private partnership, where basic and necessary definitions would be given. On the other hand, some rules that relate to individual forms of public-private partnership are present in national legislation. For example, the investment code of the Republic of Belarus fixes provisions on concession agreements. However, it should be noted that in practice the use of the concession mechanism is virtually non-existent.

Private Sector participation in infrastructural projects in the Kyrgyz Republic (1990-2014yy.)

There is a special law in the Kyrgyz Republic - Law of the Kyrgyz Republic No. 7 of February 22, 2012 “On public-private partnership in the Kyrgyz Republic” which is appropriate for examination in the context of PPP. It is in fact, a good example of ineffective legislation. It is not structured in chapters- rather it includes 35 articles which provide several extremely general provisions. Thus, the Kyrgyz Republic also cannot boast of high-quality legislation in the sphere of public-private partnership [1].

Private Sector participation in infrastructural projects in Armenia (1990-2016yy.)

The Armenian legislation also does not regulate public-private partnership properly. The main types of PPP partnership in Armenia are trust management, leasing, concession, privatization of facilities and transfer of assets, and co-financing of infrastructure development projects. In general, to consider such types of partnerships as PPPs is not entirely accurate, although some researchers are inclined to do so [6].

As we can see from this brief overview of the legislation on public-private partnerships in the EAEU countries, the EAEU member states implement their own legislative activities, following their own principles and perceptions of public-private partnership. Thus, there cannot be a talk about joint PPP projects in interstate terms. Nevertheless, there exists a very qualitative and competent Model Law of the CIS “On Public-Private Partnership” written by a group of lawyers from St. Petersburg State University. The concept of the Model Law “On Public-Private Partnership” emphasizes that the best course of action is to adopt a general law on PPP (public-private partnership) and fix its concept, content, principles, subjects, objects and forms of PPP. The fact is that such a law can only be a framework. It cannot cover sufficient details of the legal regulation for each particular state. After all, the PPP concept represents extremely diverse forms of cooperation between the state and business: concession agreements

and life-cycle contracts, production sharing agreements, leases with investment conditions, complex forms of contracts for the performance of works and services for public needs, trust management contracts, the establishment of business entities with mixed public-private participation, special economic zones, venture funds, and so on. Proposals for actual legislation on PPP would not only be required to outline the basis for regulating PPP, but will also detail regulatory legal requirements for various PPP facilities and entities, determine the permissible legal forms of implementation (the list of forms would ideally be open to inspection, review, and potential development), the means of state regulation of PPPs and competitive procedures (e.g. tendering processes) for selecting a private partner [5].

It should be considered above all that due to the similarity of the technical and physical infrastructure, the management approaches of governments, the culture of the business communities, longstanding business relationships and the shared linguistic environment in the EAEU and CIS countries, it ought to be possible to effectively utilize PPPs to achieve higher levels of international cooperation in the context of the development of Eurasian integration.

Efforts to introduce approaches that would allow the EAEU countries to develop the PPP mechanism have been the subject of discussion among international organizations, most notably in the United Nations Economic Commission for Europe and the World Bank. [10] For example, the United Nations Economic Commission for Europe has outlined the following recommendations for developing the PPP mechanism in individual EAEU countries:

- 1) That institutional consideration should be given to studies regarding international experiences in the implementation of successful PPP projects;
- 2) That countries should create a dedicated Ministry or department which would be assigned responsibility for implementing the PPP mechanism;
- 3) That implementation of the PPP mechanism should be aimed toward the transition of the countries of the Eurasian space to the "green economy";
- 4) That the PPP department or Ministry should be prioritized by the respective Ministry of Economic Development by allocating additional resources, both human and financial, to ensure that this department best fulfills the role assigned to it, and so that the application of new knowledge around PPPs is encouraged in the implementation of sustainable infrastructure projects;
- 5) That the equal participation of the public sector and the private sector in creating new opportunities and active participation of the private sector in the delivery of public services is encouraged and incentivized.

The World Bank, for its part, made the following recommendations on the development of the PPP mechanism in the EAEU countries:

- 1) That the creation of favorable conditions for PPP, a clear policy on budgetary and financial support for PPPs and improvement of concessions and relevant legislation should be developed;
- 2) That development of a financial model for managing fiscal risks and monitoring contingent liabilities related to PPPs is necessary;
- 3) The creation of a centralized database of all objects for PPP;
- 4) The prioritization of viable projects based on convincing and robust financial models;
- 5) That the mitigation of risks taken by the participants should be given due consideration;
- 6) That the interests of all affected parties should be thoroughly considered.

As such, given the foregoing recommendations, and based on publicly available materials encouraging the use of the PPP as an instrument for promoting cooperation among the EAEU countries, it is seen to be necessary:

- To form a common terminology and principles of PPP in the EAEU countries;
- To create conditions for the application in the EAEU countries of a single list of PPP models;
- To conclude a tripartite cooperation agreement between the respective national PPP development centers (with the prospect of expansion);
- To take steps to unify the legislative base of the EAEU countries so that public and private partners can act as residents throughout the Union, removing not only customs barriers for them, but also additional tax restraints. It will promote economic integration and open additional opportunities for attracting extra budgetary finances and other resources in PPP projects in various infrastructure sectors in the EAEU countries;
- To form an international council on PPP problems, which will include representatives of the EAEU countries, the business and scientific community, and non-profit associations. Such a council (on international public-private partnerships) was recommended to be set up at the United Nations during the third session of the United Nations Economic Commission for Europe on the problems of international public-private partnership, held in Geneva (Switzerland) on 18-19 April 2011. One of the priority tasks in the work of the proposed council would be the development of the aforementioned model legislation on PPP and interstate economic cooperation;

- To use practical experience in implementing interstate PPP projects. An example of a successful interstate PPP is the project for the expansion and modernization of the international airport in Warsaw, through which more than 85% of all passengers of international flights have passed;

In tandem with the foregoing, it must be considered that the 'new model' of globalization advanced by the USA forces us to look at the problem of international PPP in a new way. The president of the United States of America, Donald Trump, has allegedly considered the possibility of initiating of the United States' exit from the World Trade Organization (WTO). According to preliminary data, Trump does not fully understand the benefits of cooperation with the WTO. It has also been stated that Trump suspects that the organization is a means by which the rest of the world may try to manipulate the USA. It may be surmised that according to this example of Donald Trump's understanding, the process of globalization has ended, and that Washington is destined to drift into a 'trade war' with the European Union and China. According to this line of thought, in the nearest future the White House may be justified in raising import duties once again. What we have seen, as of February 2018, is that the USA did indeed raise import duties on Turkish goods. Additionally, Beijing has also expressed a protest in connection with the institution of new US import duties concerning Chinese goods. The authorities of China see this as an act which forces their hand, and are as such compelled (according to statement of the Ministry of commerce of the People's Republic of China) to institute their own counter measures in the form of similar duties. In this regard, China has introduced reciprocal 25% duties on imports of American goods to the amount of \$16 billion. Beijing has also expressed a protest in connection with these restrictive trade measures taken by Washington, and have expressed that they intend to initiate formal complaint procedures with the World Trade Organization. Experts have stated that the United States has indeed violated the rules of the WTO and are "waging economic war with the whole world". Analysts are convinced that an increase in duties will negatively affect growth rates of world trade and economy. However, it isn't exactly clear yet with whom Trump is struggling. Since March 23rd 2018, the United States has introduced duties on steel and aluminum production — 25% for steel and 10% for aluminum, which extend to all states which deliver production to the USA. However, the European Union countries, and also Australia, Argentina, Brazil, Canada, Mexico and the Republic of Korea received a delay on implementation for their imports until June 1st of 2018.

On foot of the measures taken by Washington, a number of states (including Russia, Canada, Mexico, Switzerland, India, Norway and some EU countries), have also initiated claims processes in the World Trade Organization. The US has even raised taxes on steel and aluminum

which are imported to the USA from Canada and Mexico, the closest allies of the USA in the NAFTA group. The same rise in taxes has been implemented against steel and aluminum which is imported from EU countries, from Japan, South Korea, naturally, from Russia and China. In essence, it may be articulated that this increase in duties is indeed tantamount to economic warfare on all fronts, which may negatively affect the international status of globalization as a concept in itself, and international economic synergy in practice.

Conclusion

The preponderance of evidence suggests that the implementation of the recommended proposals outlined in this paper will help to lay the conceptual foundations of PPP mechanisms in the EAEU countries and will promote the development of international cooperation in the field of PPP and coordination between the EAEU countries at the interstate level. The coordinated policy and similar mechanisms for regulating the sphere of PPPs will allow for the creation of preconditions for in-depth cooperation between states that will remove barriers for foreign investors and entrepreneurs from the EAEU countries. This will enable competition between regional investors on PPP projects throughout the whole territory of the EAEU, thereby encouraging investment in social projects which will ensure the sustainable growth of business activity and a rise in the standard of living for the population.

The conclusions of the above research point towards the exceptional value of development of the mechanism of public-private partnerships. The results indicate that this is the most effective and readily-available instrument for the swift reorganization and modernization of the economy in the EAEU countries.

It can be seen that the state, in implementing projects with the use PPP mechanisms, will honor national interests and have the opportunity to control the implementation of socially significant projects. Meanwhile, private sector actors will similarly benefit from these projects not only financially, but also through developing experience of novel forms of project administration, resource management and strategic methodologies. Thus, the PPP is a strategic form of investment and may allow investors to achieve all the primary goals of their investment policies, including the profit motive, while also accommodating individual negotiation regarding the necessary conditions for investment.

It may be stated, finally, that the countries of the EAEU should consider all the nuances of adopting PPP models, including the possibility of decreased economic efficiency while the PPPs are not being utilized. On this point, it should be stressed that the potential benefits for removing the current barriers to foreign public and private investment through such models should be primarily considered with one eye upon those projects of great social importance that may be achieved.

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Нефинансовая отчетность: международный контекст, российская практика

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Аннотация

Целью исследования является оценка существующей практики реализации системы учета и отчетности в области устойчивого развития компаний, разработка предложений по совершенствованию нормативной базы в сфере нефинансовой отчетности (в рамках работы автора над международным научно-исследовательским проектом, University of Western Ontario, Canada). Неотъемлемой частью современного российского и международного бизнеса становится корпоративная социальная ответственность. Соответственно возрастают требования к качеству нефинансовой отчетности и учету. Детальный анализ российского и международного опыта, оценка актуальных трендов, на наш взгляд, будет способствовать повышению эффективности системы нефинансового учета и отчетности.

В статье представлен обзор последних тенденций в исследованиях, посвященных проблематике нефинансового учета и отчетности. Новизна статьи заключается в оценке и систематизации современных подходов к изучению проблем развития системы учета и отчетности в сфере устойчивого развития, предложены рекомендации по формированию нормативной базы в сфере нефинансовой отчетности.

Анализ показал, что для России наибольшее внимание следует уделять совершенствованию законодательной базы об индикаторах, предоставляемых в публичной нефинансовой отчетности, проблеме измерений разных форм капиталов, в том числе интеллектуального капитала, внесению таких индикаторов в регулирующие документы для реализации соответствующего федерального закона. Данный федеральный закон должен обеспечить предоставление публичной нефинансовой отчетности государственными корпорациями, публичными акционерными обществами, а также компаниями с существенным годовым объемом выручки и величиной активов.

Согласно результатам исследования наиболее прогрессивной формой публичной нефинансовой отчетности является интегрированная отчетность, концептуальный подход которой основан на интегрированном, системном мышлении. Системный подход к раскрытию нефинансовой информации создаст дополнительные возможности для анализа и совершенствования различных экономических, социальных и экологических аспектов развития российских и международных компаний. Соответственно, перспективным является формирование детализированного отечественного законодательства в сфере интегрированной отчетности в контексте реализации концепции устойчивого развития.

Ключевые слова: нефинансовая отчетность, устойчивое развитие, интегрированная отчетность, интеллектуальный капитал, глобальная инициатива по отчетности (GRI)

JEL: G30, Q56, Z00

Введение

Международные и отечественные тенденции последних лет обуславливают активное развитие системы нефинансовой отчетности. Государство перестает играть основную роль в этом процессе, одновременно повышаются требования, связанные с устойчивым развитием компаний, со стороны крупнейших фондовых бирж, возрастают запросы в отношении публичной нефинансовой отчетности со стороны акционеров и инвесторов. По состоянию на апрель 2018 г. в крупнейшей электронной базе данных нефинансовых отчетов *Corporate Register* было зарегистрировано 95 492 отчета, представленных 15 896 организациями. Количество отчетов постоянно растет, в последние годы наблюдается снижение темпов роста [Corporate Register, 2018].

Развитие системы нефинансовой отчетности в России в целом соответствует международным тенденциям. К 2010 г. количество компаний, регулярно публикующих отчетность в сфере устойчивого развития, превышало 100. В настоящее время около 170 российских компаний реализуют концепцию устойчивого развития и публикуют соответствующую отчетность, общее количество опубликованных отчетов превысило 820. По данным Национального Регистра корпоративных нефинансовых отчетов и Библиотеки корпоративных нефинансовых отчетов Российского союза промышленников и предпринимателей по состоянию на 17 апреля 2018 г. за период, начиная с 2000 г., выпущено 73 экологических отчета, 311 социальных отчетов, 277 отчетов в области устойчивого развития, 141 интегрированный отчет, 26 отраслевых отчетов [РСПП, 2018].

Ситуация последних лет характеризуется равномерным ростом публикуемых нефинансовых отчетов. Тем не менее большинство крупнейших российских компаний не формируют нефинансовую отчетность, особенно это характерно для строительной отрасли, отрасли информационных технологий, ритейла, финансовой и телекоммуникационной сферы [Нефинансовая отчетность, 2017]. Напротив, наиболее активны в плане реализации концепции устойчивого развития компании атомной, энергетической, нефтегазовой, металлургической и химической отраслей [РСПП, 2018]. 10 из 20 крупнейших частных российских компаний, входящих в Рейтинг *Forbes* 2016 г., публикуют нефинансовую отчетность (в том числе ПАО «ЛУКОЙЛ», ОАО «Сургутнефтегаз», ПАО «Татнефть», ПАО «Северсталь», ПАО АНК «Башнефть») [Forbes, 2016].

Обзор исследований

Проблематика нефинансовой отчетности привлекает пристальное внимание исследователей уже более четверти века. Учет и отчетность – категории крайне консервативные, тем не менее развитию системы нефинансовой отчетности способствуют глобальные политические, экономические, социальные и экологические

изменения [Lehman, Kuruppu, 2017]. Многие современные исследователи считают, что мы стоим на пороге революции в финансовом и нефинансовом учете и отчетности [Chambers, 1999; Lehman, Kuruppu, 2017; Deegan, 2017]. Предлагаются новые информационные парадигмы развития учета и отчетности [Lev, Gu, 2016]. Целесообразным представляется выделить четыре основных подхода к исследованию проблем развития системы нефинансовой отчетности.

Один из подходов к исследованию природы нефинансового учета и отчетности подразумевает рассмотрение этих систем в рамках концепции менеджериализма, в которой основными критериями успешности бизнеса являются показатели эффективности, именно на основании этих показателей принимаются основные управленческие решения. При данном подходе отличительной особенностью является отсутствие критики существующей системы нефинансовой отчетности в целях ее трансформации, обоснование стратегии прагматичной интеграции нефинансового учета и отчетности с бизнесом (с точки зрения управления) [Burritt and Schaltegger, 2010]. Внешняя среда, социальные и экологические системы рассматриваются с точки зрения полезности для бизнеса. Этот подход не допускает предположения о том, что природа имеет ценность сама по себе. Нефинансовая отчетность с этой точки зрения является лишь дополнительной информацией в общей системе корпоративной отчетности, позволяющей увеличить конкурентоспособность бизнеса, повысить его эффективность [Baker and Schaltegger, 2015]. Происходит адаптация исследований проблематики нефинансового учета и отчетности к существующим экономическим, бизнес-парадигмам, обосновывается внедрение новых технологий отчетности [Gray, 2013]. Эти исследования прежде всего нацелены на поиск возможностей, с помощью которых социальная и экологическая информация может способствовать совершенствованию бизнес-операций. Кроме того, работы в этой области позволяют выделять способы для получения информации различными группами внешних стейкхолдеров, а также в целях повышения эффективности процесса принятия внутренних управленческих решений на основе данных нефинансовой отчетности. Исследователи отмечают, что при использовании данного подхода представление нефинансовой информации в соответствующей отчетности безусловно будет меняться, но фокус в ближайшее время останется на процедурах представления нефинансовой отчетности как отражении влияния неолиберальных идеологических принципов и точек зрения [Lehman, Kuruppu, 2017].

Эволюционные теории развития нефинансовой отчетности подразумевают совершенствование экологических систем, развитие социальных отношений в соответствии с существующими социально-экономическими системами [Contrafatto, Thomson, and Monk, 2015; Thomson, 2015]. В основе данного подхода лежит

утверждение об отличительной нравственно-этической природе исследований в области нефинансового учета и отчетности. Социальные изменения возникают на базе существующей системы посредством этических и моральных трансформаций, на которые влияют различные культуры. Это улучшает этические результаты взаимодействия людей друг с другом, положительно влияет на социальные и экологические системы [Lehman, Kuruppu, 2017]. Многие современные ученые также исследуют роль бизнеса в развитии общественных отношений [Walker, 2016], природу взаимоотношений между бизнесом и государственными институтами, обладающими потенциалом информировать людей, для которых окружающая среда (природа) является важнейшим ресурсом [Arrington, Francis, 1989, 1993; Arrington, Schweiker, 1992; Lehman, 2013, 2017]. Эти работы нацелены на понимание природы социального учета, на исследование того, как различные сценарии нефинансового учета и учетных практик могут быть эффективно интегрированы в трансформационные программы устойчивого развития, как нефинансовая информация может влиять на социальные изменения. Авторы также фокусируются на микрополитических изменениях, которые влияют на изменение отношений в обществе [Gray, Brennan, Malpas's, 2014]. Исследуются причины того, что концепция устойчивого развития часто «пробуксовывает» в добывающих компаниях, не совпадая с целями и возможностями данных компаний. Наиболее актуальным моментом эволюционных теорий продолжает оставаться вопрос о том, что же означает социальная ответственность компании [Harvey, 2014].

Существуют также радикальные теории, основанные на критике современной системы нефинансовой отчетности и социально-экономических отношений, лежащих в основе ее формирования. При этом не стоит забывать, что те идеи, которые ранее казались радикальными (например, идеи марксизма), теперь уже классика, воплощенная на практике. Осуществляется критика существующих моделей, идеи нерегулируемой максимизации прибыли в среднесрочной и долгосрочной перспективах, неравенства в современном обществе, а также тех основ, на которых формируется нефинансовая отчетность: политических процессов, базирующихся на политической и социальной природе капиталистических отношений с учетом таких глобальных социофилософских течений, как марксизм и постмарксизм [Tinker, Neimark, Lehman, 1991]. Исследователи также подчеркивают, что прежде всего необходимо совершенствовать нормативную базу с целью предотвращения деятельности компаний, противоречащей основам устойчивого развития. Роль нормативных документов при этом рассматривается в контексте совершенствования социально-экономических отношений. Вместо концентрации на экоэффективности, измерении показателей, процедурах отчетности, управлении финансовым, социальным, экологическим влиянием компаний ряд

ученых предлагает пересмотреть значение и смысл понятия «успех» и на этой основе исследовать природу контроля за устойчивым развитием компаний [Milne, Gray, 2013]. При этом подчеркивается, что нормативная база должна выстраиваться на основе прогрессивных учетных практик и исследований [Spence et al., 2013; Gray et al., 2014; Buhr, Gray, Milne, 2014]. Часть исследователей предлагает искать пути решения проблем в рамках существующей социальной системы. Действительно, существующая система, которая привела к экологическому кризису, с очень небольшой долей вероятности сможет найти пути его преодоления; менять или кардинально реформировать необходимо саму систему [Lehman, 2015].

Четвертый подход к исследованию проблем развития системы нефинансовой отчетности подразумевает интерпретацию, изучение природы нефинансового учета, выявление особенностей взаимодействия социальной, экологической и экономической систем, что позволило выдвинуть гипотезу, согласно которой нефинансовая отчетность поэтапно позволяет компаниям придерживаться принципов устойчивого развития. Необходимо не только интегрировать устойчивое развитие в бизнес, но прежде всего сделать так, чтобы каждый менеджер думал о том, как реализовывать в своей работе концепцию устойчивого развития [Higgins, Coffey, 2016]. Ряд исследователей иллюстрируют ограничения реализации системы нефинансовой отчетности и соответственно принимаемых на ее основе решений [Brown, Dillard, 2015]. При этом акцентируется, что необходимо внедрять такую систему нефинансовой отчетности, которая будет в наибольшей степени соответствовать природе существующих экологических систем [Lehman, 2015]. Наиболее прогрессивные, на наш взгляд, исследования концентрируются на изучении природы «неустойчивого» развития, перспектив развития нефинансового учета и отчетности, роли учета в изменении мировой экономики [Gray, 2016; Milne, Gray, 2013].

Таким образом, по мнению многих ученых, за последние несколько лет был достигнут значительный прогресс в исследовании развития системы нефинансового учета и отчетности, тем не менее существует огромный потенциал относительно будущих исследований по данной проблематике [Parker, 2011; Owen, 2008; Deegan, 2017; Lehman, Kuruppu, 2017].

Создание глобальных инициатив

Основной тенденцией последних лет в международной практике является создание эффективных инициатив и организаций в сфере устойчивого развития и нефинансовой отчетности. В 2016 г. произошло знаковое событие – вступила в силу Повестка дня до 2030 года в области устойчивого развития Организации Объединенных Наций. Она содержит 17 целей (SDGS – Sustainable development goals), имеющих количественное выражение и направленных прежде

всего на сохранение ресурсов Земли, обеспечение всеобщего благополучия и гармоничного развития. В рамках концепции устойчивого развития предполагается разрешить противоречия, сопровождающие взаимоотношения природы и общества, настоящего и будущих поколений [UNDP, 2018].

В 2016 г. произошло еще одно важное событие, непосредственно связанное с реализацией глобальных целей устойчивого развития: было подписано Парижское соглашение по изменению климата, приняты обязательства по разработке мер, предотвращающих повышение общемировой температуры более чем на два градуса Цельсия. Парижское соглашение представляет собой «дорожную карту» мер, позволяющих сократить выбросы и снизить риски, связанные с изменением климата. Ратификация Парижского соглашения Россией планируется не ранее 2019 г. В случае его нератификации, по мнению ряда экспертов, риски для российских экспортеров могут возрасти [Ответственная деловая практика, 2017].

В последние годы были предприняты другие важные международные инициативы. Так, в 2009 г. была создана United Nations Sustainable Stock Exchanges Initiative (SSE Initiative), регулярно раскрывающая информацию об особенностях существующих практик в области устойчивого развития. По итогам 2017 г. 85 бирж реализуют цели устойчивого развития, многие из них выпустили соответствующие нормативные документы по нефинансовой отчетности. К сожалению, Московская биржа не входит в этот список. Наиболее эффективно биржи реализуют такие цели устойчивого развития, как борьба с изменениями климата, ответственное потребление и производство, гендерное равенство, партнерство в интересах устойчивого развития [SSE Initiative, 2018]. Информация к раскрытию, запрашиваемая биржами – участниками данной организации от компаний, включает прежде всего цели компании в сфере устойчивого развития, потребление водных ресурсов, выбросы в атмосферу загрязняющих веществ.

Функционирование G20 Green Finance Study Group также способствует реализации концепции устойчивого развития, расширяет возможности финансирования соответствующих проектов. В 2017 г. деятельность группы была сконцентрирована на двух основных направлениях: *ERA* (environmental risk analysis) в финансовой отрасли и *PAED* (publicly available environmental data) – использование соответствующих данных в финансовом анализе [G20, 2017]. Основной целью группы является определение институциональных и рыночных барьеров зеленому финансированию и изучение возможностей финансовой системы мобилизовать частный капитал для зеленых инвестиций, опираясь на опыт различных стран.

Деятельность созданной в 2007 г. инициативы *PRI* (Principles for Responsible Investment) сосредоточена на развитии финансовой системы, соответствующей принципам устойчивого развития (*SFS* – sustainable

financial system). По итогам 2017 г. количество компаний – участниц данной инициативы превысило 1700. *PRI* эффективно реализует проекты, соответствующие целям ответственного инвестирования, объединяющие интересы различных групп инвесторов, рейтинговых агентств.

Необходимость изменений в законодательстве ряда стран Европейского союза была продиктована принятой Directive 2014/95/EU (далее – Директивой). Компаниям со среднесписочной численностью сотрудников 500 и более человек в обязательном порядке необходимо раскрывать нефинансовую информацию, связанную с экологическими и социальными аспектами, предписанными этой Директивой [DIRECTIVE, 2014]. Компании также обязаны раскрывать нефинансовые ключевые показатели эффективности (*KPI* – Key Performance Indicators). Новые требования к раскрытию данных направлены прежде всего на унификацию и повышение прозрачности нефинансовой отчетности.

Кроме того, важнейшими инициативами стали принятие Повестки по финансированию для развития (Action Agenda for Financing for Development), создание Рабочей группы по зеленому финансированию (Green Finance Study Group) и Плана действий по раскрытию финансовой информации по изменению климата (Task Force on Climate-related Financial Disclosures by the Financial Stability Board), появление рабочей группы по раскрытию финансовой информации, связанной с изменением климата (Financial Stability Board's Task Force on Climate-Related Financial Disclosures) [Ответственная деловая практика, 2017]. Обобщая вышесказанное, важно отметить, что рост количества инициатив, разработка нормативной базы в данной сфере в последние годы говорит о возрастающем внимании со стороны общества, бизнеса, государственных институтов к проблемам социальной и экологической безопасности, устойчивого развития, совершенствования нефинансовой отчетности.

Развитие стандартов нефинансовой отчетности

В сфере нефинансовой отчетности не существует единого подхода к предоставлению информации, тем не менее создаются международные и отечественные стандарты и рекомендации, в том числе с целью обеспечения сопоставимости отчетов различных компаний. Наиболее часто используемыми являются следующие нормативные документы: стандарты *GRI*, *SASB*, стандарты серий *ISO*, *AA 1000*, Рамочное руководство по интегрированной отчетности, Глобальный договор ООН, Рамочное руководство по экологической отчетности, Протокол по естественному капиталу, Социальная хартия российского бизнеса.

На наш взгляд, наиболее детальные рекомендации в отношении элементов нефинансовой отчетности и используемых показателей содержатся в стандартах

GRI [GRI, 2018]. Большинство российских компаний применяют именно этот стандарт. В разработанной несколько лет назад новой версии GRI G4 подчеркивается, что стандарт стал удобнее в использовании, чем предыдущие его редакции, более того, в нем делается акцент на темах, наиболее существенных для бизнеса и общества. Данная версия является наиболее популярной в настоящее время. В 2016 г. GRI представила модульные стандарты. Была изменена структура стандартов нефинансовой отчетности: предлагаются три универсальных стандарта (GRI 101: Основные стандарты, GRI 102: Общие показатели отчетности, GRI 103: Подход в области менеджмента) и 33 специфических стандарта, сгруппированных в три серии (Серия 200 «Экономические стандарты», Серия 300 «Экологические стандарты», Серия 400 «Социальные стандарты»). Компании имеют право выбирать те специфические стандарты, которые способствуют раскрытию наиболее существенных аспектов. Компании также вправе публиковать либо полноценный отчет, либо выборочные данные по определенным специфическим стандартам с указанием того, какие именно стандарты и показатели использовались. Модульные стандарты упрощают процесс публикации отчета компаниями – «новичками» в этой сфере, предоставляя возможность поэтапного раскрытия нефинансовой информации.

Популярными прежде всего среди публичных компаний США и компаний, акции которых котируются на американских фондовых биржах, являются стандарты, разработанные Sustainable Accounting Standards Board (SASB). Детально разработанные стандарты позволяют отражать нефинансовую информацию в формах 10-K, 20-F, 40-F в соответствии с законодательством США. С каждым годом растет количество сертифицированных бухгалтеров в сфере устойчивого развития (FSA – Fundamentals of Sustainability Accounting Credential) [SASB, 2018].

Последние изменения стандартов серии AA1000 направлены прежде всего на установление более тесной взаимосвязи ключевых принципов концепции устойчивого развития, применении прогрессивных международных практик в данной сфере.

В 2010 г. был опубликован ISO 26000: международный стандарт, содержащий руководство о том, как компании могут работать социально ответственным образом [ISO, 2018]. ISO 26000 содержит определение социальной ответственности и других важнейших категорий, принципы социальной ответственности и подробные рекомендации по их реализации. В последние годы также активно выпускаются ISO 14001: международные стандарты по управлению окружающей средой, содержащие требования соблюдения компаниями ограничений на использование энергии, выбросов углерода, уменьшение отходов, сокращение использования воды. Данные стандарты также являются признанными лидерами в области экологии на международном уровне [ISO, 2018].

Трендом последних лет стал рост количества и качества стандартов и руководств в сфере нефинансовой отчетности. При этом GRI продолжает оставаться лидером среди используемых платформ нефинансовой отчетности, сочетая не только учетные, но и аналитические функции. GRI реализует стратегию, предусматривающую установление партнерских отношений с другими платформами отчетности в области устойчивого развития и использование компаниями различных систем показателей.

Интегрированное мышление и интегрированная отчетность

Важной тенденцией сегодня является развитие системы интегрированной отчетности, перспективной с точки зрения интегрированного мышления, глобализации, комплексного подхода к данным, систематизации информации компаний, инвестиционной привлекательности. Интегрированная отчетность призвана объединить финансовую и нефинансовую отчетность, публиковать информацию в более удобном для инвесторов формате. Важнейшей задачей интегрированной отчетности является развитие интегрированного мышления.

В международной практике интегрированные отчеты были впервые опубликованы в середине 2000-х гг. В 2010 г. был образован Международный Совет по интегрированной отчетности. В этом же году компаниям, акции которых котируются на фондовой бирже Йоханнесбурга (ЮАР), было предписано предоставлять интегрированную отчетность. Количество интегрированных отчетов крупнейших компаний продолжает расти. Среди партнеров Международного Совета по интегрированной отчетности: Association of Chartered Certified Accountants (ACCA), Chartered Institute of Management Accountants (CIMA), International Federation of Accountants (IFAC), IFRS Foundation, Sustainability Accounting Standards Board, Global Reporting Initiative, World Business Council for Sustainable Development [IIRC, 2018]. В отечественной практике соответствующие исследования проводятся, и развитие системы отчетности происходит с участием Российской региональной сети (PPC) по интегрированной отчетности, созданной в 2012 г. по инициативе Государственной корпорации по атомной энергии «Росатом» при поддержке Международного совета по интегрированной отчетности [PPC, 2018].

Концепцию интегрированной отчетности поддерживают крупнейшие компании, входящие в пилотную программу при Международном Совете по интегрированной отчетности: *Danone, Coca-Cola, Deloitte, KPMG, HSBC, Unilever, Microsoft, Volvo*. Отечественные компании (Государственная корпорация по атомной энергии «Росатом», ПАО «НК «Роснефть», К «УРАЛСИБ») также участвуют в пилотном проекте [IR, 2018]. Вызовы и риски, связанные с формированием системы интегрированной отчетности,

включают прежде всего недостаток доверия к отчетам со стороны инвесторов, неразработанность некоторых аспектов, сложность в их понимании, что ведет к медленным темпам развития.

Отечественные тенденции в сфере нефинансовой отчетности

В отечественной практике наиболее актуальным документом в плане реализации концепции устойчивого развития стало подписанное Председателем Правительства Российской Федерации 5 мая 2017 г. Распоряжение об утверждении Концепции развития публичной нефинансовой отчетности и плана мероприятий по реализации Концепции развития публичной нефинансовой отчетности (далее – Концепция). Появлению данной концепции предшествовало принятие в 2012 г. Директивы Председателя Правительства РФ В.В. Путина, предписывающей государственным компаниям (22 компании с государственным участием) необходимость предоставления нефинансовой отчетности. В Концепции отмечается, что «стимулирующую роль в развитии публичной нефинансовой отчетности может оказать резолюция Организации Объединенных Наций, содержащая 17 целей в сфере устойчивого развития и определяющая, с одной стороны, необходимость разработки системы показателей с целью мониторинга достижения этих целей как на национальном, так и на глобальном уровне, с другой стороны, включающая задачи по отражению вклада организаций в устойчивое развитие, решаемые в рамках публичной нефинансовой отчетности» [Концепция, 2017]. Публичная нефинансовая отчетность раскрывает информацию о деятельности в области устойчивого развития, отражает взаимосвязь экономических, социальных и экологических аспектов. Концепция направлена прежде всего на развитие системы стимулирования компаний к росту прозрачности и информационной открытости результатов влияния их деятельности на окружающую среду и общество, в разрезе экономической, социальной и экологической составляющих; повышение информированности о международных стандартах и инициативах в области устойчивого развития. Среди основных задач Концепции важно отметить создание фундамента для формирования нормативно-правовой базы по вопросам устойчивого развития; поддержка распространения и использования в деятельности компаний единых понятий в сфере соответствующей отчетности; содействие повышению квалификации и развитию профессиональной подготовки в сфере устойчивого развития. Наиболее значимым моментом в этой связи является конкретный План мероприятий по реализации указанных задач. Реализация Концепции предусматривает несколько этапов. На первом этапе (2017–2018) приоритетным является развитие нормативной и методической базы; определение состава базовых показателей, необходимых для

раскрытия информации о деятельности компаний в экономической, социальной и экологической сферах; определение перечня компаний, для которых требование публикации нефинансовой отчетности будет обязательным. На втором этапе (2019–2020) планируется дальнейшее развитие нормативной и методической базы, внедрение стимулирующих механизмов; развитие системы повышения квалификации специалистов, совершенствование образовательных программ; расширение требований обнародования результатов деятельности в области устойчивого развития прежде всего на государственные компании. На третьем этапе (2021–2022) предусматривается внедрение требования в отношении параметров подтверждения, проверки соответствующей отчетности; в состав компаний, на которые распространяется требование публикации отчетности, предполагается включить акционерные общества, ценные бумаги которых котируются на биржах. На четвертом этапе (с 2023 г.) планируется распространить требование публикации отчетности в области устойчивого развития и прочих видов публичных нефинансовых отчетов на 500 крупнейших российских компаний, объем выручки которых соответствует критериям ведущих российских рейтингов [Концепция, 2017].

Другим важнейшим документом, принятым в последние годы, стал Кодекс корпоративного управления, одобренный советом директоров Банка России 21 марта 2014 г. и содержащий рекомендации прежде всего крупным публичным частным и государственным компаниям. В Кодексе корпоративного управления в том числе содержатся рекомендации по раскрытию информации в сфере экологической и социальной ответственности. Такая информация может включать описание политики компании в социальной и экологической сфере, а также отчетность о деятельности в области устойчивого развития, составленную в соответствии с международными стандартами нефинансовой отчетности.

В отечественной практике экологическая отчетность является обязательной для предоставления в государственные органы статистики, но не публичной. В 2012 г. были приняты «Основы государственной политики в области экологического развития Российской Федерации на период до 2030 года» (утверждены Президентом РФ 30.04.2012), предусматривающие развитие нефинансовой отчетности на добровольной основе, постепенный переход к обязательной публикации соответствующей заверенной отчетности компаниями с государственным участием. В дальнейшем были приняты важнейшие нормативные акты, реализация которых должна изменить ситуацию в экологической сфере: постановление Правительства РФ от 15.04.2014 № 326 «Об утверждении государственной программы Российской Федерации “Охрана окружающей среды” на 2012–2020 годы» и Указ Президента РФ от 19.04.2017 № 176 «О Стратегии экологической безопасности Российской Федерации на период до 2025 года».

Выводы

Несмотря на трансформацию общественного мнения и значительные перемены в области устойчивого развития, изменения в сфере нефинансовой отчетности происходят очень медленно. Существует множество точек зрения о том, какие изменения будут происходить в этой области в ближайшие годы: будут меняться подходы к сбору и анализу данных в сфере устойчивого развития; нефинансовая отчетность будет представлять собой информацию в режиме реального времени, поступающую из различных источников. Проблематика, определяющая будущее нефинансовой отчетности, включает прежде всего 17 целей устойчивого развития, глобальные вызовы: рост населения и неравенства доходов, защита прав человека, изменение климата, охрана экосистем, управление эффективностью бизнеса, цифровизация экономики [Lehman, Kuruppu, 2017; Deegan, 2017; Ответственная деловая практика, 2017]. Развитие единой системы международных стандартов нефинансовой отчетности, отражающих отраслевую специфику, позволит использовать нефинансовую информацию в управлении бизнес-процессами, будет способствовать формированию бизнес-моделей, нацеленных на устойчивое развитие.

В международной практике наблюдается рост количества заверенных нефинансовых отчетов. В России по итогам 2016 г. половина компаний, выпускающих нефинансовую отчетность, не использовала форму внешнего заверения отчетов. Сохраняется тренд наибольшей востребованности общественного заверения Советом нефинансовой отчетности РСНП (примерно 20% от общего числа отчетов). Происходит увеличение количества компаний, использующих несколько типов проверки: например, со стороны профессиональных аудиторов и РСНП [РСНП, 2018]. В целом отечественные тенденции в сфере развития системы независимого заверения отчетности соответствуют международным трендам.

Как нам кажется, эффективное формирование системы нефинансовой отчетности невозможно без повышения уровня образованности в данной сфере. Целесообразным представляется введение обязательного курса «Нефинансовая отчетность» на программах магистратуры при получении экономического образования, развитие системы сертификации соответствующих специалистов.

В соответствии с проведенным анализом важно подчеркнуть, что необходимо дальнейшее совершенствование нормативной базы в отношении оцифровки капиталов, в том числе интеллектуального капитала [Feruleva, Ivashkovskaya, 2018], в контексте устойчивого развития компаний, данных об основных показателях, предоставляемых в отчетности в сфере устойчивого развития. Кроме того, в этой связи важным является скорейшее принятие федерального закона, обеспечивающего раскрытие соответствующей отчет-

ности государственными корпорациями, публичными акционерными обществами, а также компаниями с годовым объемом выручки или величиной активов в размере 5 млрд руб. и более.

Одним из трендов в международной практике становится рост количества компаний, раскрывающих в нефинансовой отчетности данные по ключевым показателям эффективности (KPI) в сфере устойчивого развития, таких как рост энергоэффективности; снижение потребления воды; сокращение выбросов в результате модернизации оборудования и внедрения производственных технологий, соответствующих принципам устойчивого развития. Важным моментом является дальнейшее расширение и совершенствование отечественных методик по раскрытию информации о ключевых показателях эффективности в нефинансовой отчетности, соответствующих прогрессивным международным практикам [Ivashkovskaya, Stepanova, Eliseeva, 2014].

Наиболее заметной тенденцией последних лет в отечественной и международной практике стало повышение интереса к интегрированной отчетности, комплексному подходу к раскрытию информации о деятельности компании. При переходе на интегрированный формат отчетности важным является минимизация рисков, связанных с сокращением существенной информации, влияющей на качество публикуемых отчетов. В этой связи целесообразным является развитие системы нормативного регулирования в сфере интегрированной отчетности в международной и отечественной практике.

Как показывает проведенное исследование, развитие системы нефинансовой отчетности предполагает совершенствование международного и российского законодательства в соответствии с актуальными тенденциями, внедрение прогрессивных практик с учетом системного подхода.

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Non-financial Reporting: International Context, Russian Practice

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Abstract

The main aim of the research is to analyze the existing sustainability accounting and reporting practices, to set up recommendations for improving the sustainability reporting legislation (as a result of author's participation in the international research project, University of Western Ontario, Canada). Corporate social responsibility has become part and parcel of Russian business. Consequently, the demand to the quality of non-financial accounting and reporting has increased. Detailed analysis of Russian and international experience, assessment of current trends contributes to an improvement of the non-financial accounting and reporting system.

The article includes literature review of research in non-financial reporting problematic. Particular attention is paid to current research trends. The paper contains of the acquired analysis and classification of recent themes in non-financial reporting and accounting research.

Based on this analysis, we conclude that the general attention should be paid to the improvement of legislation in the field of non-financial reporting regarding the information related to the indexes disclosed in the non-financial reports, capital data, including intellectual capital in term of companies' sustainable development. The compulsory regulation of non-financial reporting and accounting is required for state companies, joint-stock companies, companies with large sales and assets.

According to research, the most advanced form of non-financial reporting is integrated reporting. Conceptual approach to integrated reporting is based on integrated thinking. A systematic approach in the disclosure of non-financial information creates additional opportunities to analyze and improve the various aspects of the economic, environmental and social development for the Russian companies. For this purpose, the development of the detailed legislation background in integrated reporting is required.

Keywords: non-financial reporting, sustainable development, integrated reporting, intellectual capital, Global Reporting Initiative (GRI)

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