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Financialisation, instability and distributional conflict in the extractive industries: the case of South African platinum mining

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1: Introduction

This paper examines the effects of financialisation on large-firm management strategy in the extractive industries, and the accompanying developmental implications. It does so through a case study of South African platinum-group metal (PGM) mining since the transition to democracy in the mid-1990s. During this time, the South African economy underwent far-reaching liberalisation which has led to deepening processes of financialisation, with consequences for changes in management strategy (Ashman et al, 2011). As the paper describes, for the major South African mining companies integrated in increasingly globalised capital markets, this created intensified competitive pressures around the creation of shareholder value. Drawing on a wider conceptual literature on the financialisation of the firm, the paper explores how this change manifested in the strategies employed by the then three largest PGM mining companies, Lonmin,¹ Impala Platinum Holdings (Implats) and Anglo-American Platinum (Amplats), during the long commodities boom of the 2000s and subsequent period of volatility and slump from 2009-2016 (Morgan, 2014; Froud et al, 2006; Erturk et al, 2008; Leaver & Martin, 2017; Lazonick, 2010; Fligstein and Shin, 2007). Using detailed documentary analysis of company annual reports, analyst reports and company accounts, the paper demonstrates how pressures to deliver increased shareholder value during the boom years resulted in large cash distributions to investors, balance sheet engineering and costly outlays on expansion and M&A activity. The paper argues that this was in part propelled by narratives about the commodities' 'super-cycle', which provided a rationale for increased risk-taking among company management, stock-market analysts and major institutional investors. The

¹ At the time of writing, Lonmin is being purchased by Sibanye-Stillwater. This follows several PGM asset purchases since 2016 which make it the second largest platinum producer in the world. However, the company was not engaged in PGM production for the period covered in this paper.

result, the paper shows, was balance sheet fragility and excess capacity which has exacerbated the impact of the slump in subsequent years.

The paper has implications for both the study of the extractive industries and development, and for a growing literature on financialisation and development in the Global South (Mawdsley, 2016). Within this literature there has been relatively little attention to financialisation of large firm strategy and its implications for downstream upstream extractive industries (though see de los Reyes, 2016). The paper's key argument is that financialisation of large mining firms has exacerbated the already intense inherent volatility of the extractive industries, with harmful consequences for development. As discussed in Section 2, cyclical and instability is inherent to industrial mining by virtue of its specific features as a landed, capital intensive industry. However, as the article shows, financialisation of firm compelled management strategies which amplified this, creating acute distributional conflict and instability.

Secondly, the argument has implications for broader efforts to understand forms and consequences of financialisation in the South African political economy. PGM mining has particular significance here. While mining has been declining as a share of South African GDP for decades – from a high of 20% in 1980 to 8% in 2017² – it remains a pivotally important sector because of its linkages and multipliers, and its large contribution to export revenues. Within mining, PGM is the largest sub-sector by employment and, in many years, export earnings also. With more than 80% of global reserves in a geological formation known as the Bushveld Complex, South Africa is the world's most important platinum producer. Driven by growing demand from auto-catalyst manufacturing – the major source of demand for platinum and palladium – PGM mining grew rapidly in the post-apartheid period, with employment doubling to 200,000 between 1994 and a 2008 peak, while the historically dominant gold mining industry's fell from 400,000 to 165,000.³ However, PGM mining has been politically as well as economically significant, as the locus of the most severe instances of labour conflict in South Africa's post-apartheid history. The 2012 Marikana massacre, in which the South African police force shot dead 34 striking Lonmin workers, was the worst single incident of state killing since the 1960 Sharpeville massacre. Continuing demands for a 'living wage' resulted in a five-month strike by mine-workers in 2014, which was the longest in South African history. The paper argues that financialisation has exacerbated distributional tensions in the sector, as management has sought to restore internationally competitive rates of return

² South African Reserve Bank Quarterly Bulletin

³ Department of Mineral Resources data

on capital through redundancies, mine closures and asset sales. These distributional tensions relate both to the historical circumstances of entrenched racialised inequality in post-apartheid South Africa, and the specificities of the conventional platinum mining business model that is both highly labor-intensive, by the standards of mining, and dependent on sustained high levels of fixed capital investment by virtue of its challenging geology. This paper contributes to literature seeking to understand the overlapping social, economic and political tensions of the South African mining industry (Mnwana & Capps, 2015; Forrest, 2015; Chinguno, 2015; Bezuidenhout & Buhlungu, 2010; Berresford, 2016), and the post-apartheid economy more broadly (von Holdt, 2013; Hart, 2013; Marais, 2011; Bond, 2005). The first section of the paper reviews relevant literature on financialisation of the firm and the extractive industries and development. The second and third sections examine the processes of deepening financialisation in PGM mining and how this manifested in changes to management strategy. The fourth section discusses the broader implications of the findings.

2: Literature review

The most commonly employed definition of financialisation is ‘the increasing role of financial motives, financial markets, financial actors and financial institutions’ in economic life (Epstein, 2005: 3). There is a large literature exploring the phenomenon on multiple levels, from the household to national economies (see van der Swan, 2014; Davis & Kim, 2015 for reviews). One of the most significant areas of enquiry has been financialisation of the large firm, with scholars exploring the growing importance of capital market pressures in shaping corporate strategy in major Western economies, and its socio-economic implications. There has, however, been relatively little investigation of this for the Global South, and in particular the extractive industries. This section first reviews key literature on financialisation of the firm, before outlining its relevance to scholarship on financialisation in the South and the extractive industries in development.

At its most fundamental level, financialisation of the large firm is associated with the increasing primacy of short-term shareholder value delivery as a management objective. This emerged from a series of intersecting changes in the world’s advanced economies in the late 20th Century. Financial de-regulation, pension reforms, and globalisation increased the amount of capital available for stock markets and its mobility, and augmented the size and influence of institutional investors vis-à-vis retail investors (Stockhammer, 2004; Krippner, 2012; Epstein,

2005). These shifts in the organizational field for large firms, and the accompanying pressure and monitoring from institutional investors, re-shaped management agency and norms (Fligstein, 1990). This involved the growing prominence of what Fligstein called the finance, and later, ‘shareholder value conception of control’ in US management discourse and practice, whereby the firm was re-conceived as “a collection of assets that could and should be manipulated to increase short-term profits” (*Ibid*: 226), and appraised by financial metrics rather than product-market measures of success – in particular the share price (Fligstein, 2001). Alongside growing conformity around the primacy of shareholder value as a strategic objective were shifting means to deliver it. This involved increased use of balance sheet engineering, corporate restructuring and M&A activity aimed at improving key shareholder value accounting metrics and short-term share price performance relative to peers, as opposed to more conventional forms of product market competition around market share and Schumpeterian rents (Fligstein and Shin, 2007; Froud et al, 2006). In particular, hostility mounted towards multi-sector diversified conglomerates, which were presented as un-transparent for investors, unmanageable for executives and as such obstructive to shareholder value delivery: the appropriate response therefore being to sell business units which did not reflect ‘core competencies’ (Davis, Diekmann & Tinsley, 1994). In addition to this was an increased emphasis on distributing available cash to shareholders through higher dividends and share buy-backs, and correspondingly increased pressure to lower expenditure on labour, outlays on capital goods, and in particular riskier longer-term investments such as R&D, while increasing higher-yield financial investments (Lazonick, 2010; Lazonick & O’Sullivan, 2000). These shifts, and the pressures for conformity thereof in management strategy, were entrenched by increased use of variable pay instruments tying executive remuneration to financial metrics. On a macro-economic level, the consequences of shareholder revolution for firm strategy were found to be causally related to a broader slowdown in accumulation in advanced industrial economies as investment in capital goods decreased (Stockhammer, 2004).

Besides responding to the increased power of institutional investors, these strategic shifts were legitimated by arguments from neoclassical theorists presenting more focused pursuit of shareholder value as aligning with wider social welfare (Lazonick & O’Sullivan, 2000). Chiefly, among a firm’s stakeholders, employees, creditors and governments are assured contractually of their claims on the firm’s cash, while shareholders receive the residual after these claims are met. As such, they are, it is argued, the only actor properly incentivized to drive operating efficiency and resolve the principal agent problem (Jensen, 2002; Fama &

Jensen, 1983; Lazonick & O’Sullivan, 2000: 27-28; Lazonick, 2007: 985). Distribution of the residual thereby represents a necessary reward for disciplining management, who would otherwise wastefully misallocate capital, and hence also a means of ensuring efficient capital allocation across the economy as a whole (Jensen, 1986; Lazonick, 2007: 986; Fligstein and Shin, 2007: 403).

As scholars in cultural political economy assert, an additional characteristic of the financialised firm was the growing importance of narrative management in corporate strategy (Froud et al, 2006; Thrift, 2005). Despite increased sophistication in company valuation, investment still rests heavily upon subjective judgement, with “[w]hat ‘the market wants’...as much a moveable discursive construct as a set of fixed financial targets” (Froud et al, 2014: 48). As such, companies devoted increasing time to communicating a ‘story of purpose and achievement’, and narrativising growth prospects (Froud et al, 2006: 100). These can be temporarily self-fulfilling, as for example in the dot-com bubble and pre-2007 securitization boom (Thrift, 2005: 112-129; Engelen et al, 2011), but more often than not prove to be a ‘rhetoric that disappoints’ since capital market pressures force management into a ‘utopian quest for growth and higher returns whose uncertain consequences include a gap between saying and doing’ (Froud et al, 2006: 42).

Most literature on financialisation has focused on Anglo-Saxon economies, although there is a growing array of studies exploring the forms and developmental implications of financialisation in the Global South (Karwowski & Stockhammer, 2017; Mawdsley, 2016; Bracking, 2016; Bayliss, 2014; Hardie, 2011; Bonizi, 2013; Roy, 2010; Soederberg, 2013). However, there is relatively little research exploring the developmental consequences of financialisation of large firm strategy. An important exception comes from literature on global production networks (GPN). One of the key strategic responses to increased capital market pressures from major Western manufacturing was an aggressive geographical repositioning and vertical disintegration of production networks to exploit lower labour costs in emerging markets for low value-added activities (Gibbon, Bair & Ponte, 2008; Coe & Yeung, 2015; Froud et al, 2014). There is, as Morgan (2014) argues, an interdependence between the globalisation of multinational corporate activity through the spatial re-articulation of production networks and the rise of financialisation, both facilitated by neoliberal reforms. Contestation between the disparate actors constituting GPNs – including both firm and extra-firm actors – over distribution of the value produced by the activity has obvious developmental implications (Coe & Yeung, 2015). This contestation is intensified by raised shareholder value

expectations for lead firms and shortened investment time-horizons, with financialisation of lead firm strategy resulting in pressures to pass risk to and extract value from suppliers, the labour force and host governments and communities (Milberg & Winkler, 2010; Milberg, 2008; Gibbon, 2008; Froud et al, 2014).

However, outsourced export-orientated manufacturing is spatially concentrated in more successful emerging market economies, and for many countries in the Global South integration with GPNs continues to centre around primary commodities (UNCTAD, 2017). This is particularly so in most African countries (*Ibid*), and for South Africa, where primary minerals account for upwards of 20% of total exports (Chamber of Mines, 2016). Research on financialisation here has focused on the downstream of primary soft-commodity GPNs, for example, in the increasingly speculative nature of food commodity markets and the consequences thereof for producers and consumers, and the financialisation of supermarkets and multinational agri-business intermediaries which act as lead firms in food-commodity GPNs (von Braun et al, 2014; Clapp, 2014; Isakson, 2014; Borrás et al, 2016; Newman, 2009). There is, however, relatively little research on financialisation of the firm in upstream extractive industries (though see De los Reyes, 2016 and Parker et al, 2017), and this is a gap the paper seeks to address.

Extractive industry companies are frequently among the largest investors, export revenue-generators and formal private sector employers in many resource-rich developing countries. There is, correspondingly, a large literature on the role of extractive industry firms in development, analysing relationships between multinational companies, host governments and communities, and the developmental challenges deriving from the production and contestation of resource rents (Bebbington et al, 2008; Rajak & Gilberthorpe, 2017; Gilberthorpe & Papyrakis, 2015). Setting aside major state-owned companies in many emerging economies, the capital intensive nature of industrial-scale extraction means mining companies tend to be integrated with global capital markets, raising equity predominantly on the stock exchanges of London, Toronto, Sydney and to a lesser extent Johannesburg. Stock market competition among the major listed mining groups is fierce (Humphreys, 2015). Nonetheless, there has been little consideration within the extractives and development literature of the effects of financialisation of management strategy among large mining companies as anything other than a contextual backdrop. Addressing this gap can enrich the understanding of both how financialisation effects resource-rich developing economies, and how financialisation of the firm plays out in different industries.

It is important to first consider how the specific characteristics of mining as an economic activity may interact with processes of financialisation. An exception to the general lack of research on financialisation of upstream extractive industry firms in developing countries this is work by de los Reyes (2016) on gold mining, which explores the manifestations of financialisation in the gold industry during the 2000s commodities boom in pressures from institutional investors for rapid M&A-led growth and large dividend payments. “From such speculative highs”, de los Reyes notes, “the adjustment that followed was just as disruptive with the sudden withdrawal of capital, unravelling some of the capital commitments made previously” (*Ibid*: 12). The patterns described are in many respects similar to financialisation of firm strategy in other sectors. However, as Parker et al (2017) highlight, there is one highly significant distinction to address in discussions of financialisation of mining: its landed nature.

Industrial mining tends to be a ‘point source’ industry. That is, as opposed to ‘diffuse source’ resource-based industries such as agriculture, mining tends to exhibit high levels of geographic concentration around particular locales where minerals are economically viable to extract (Auty, 2001).⁴ For mining, therefore, geological properties “set absolute and relative physical limits on the course of industrial development and competition” (Capps, 2012, 66). Mining lead-firms cannot spatially re-articulate their production networks in response to crises of profitability or changing social and political conditions in the same way, for example, as manufacturing companies can do in the era of globalisation (Bridge, 2008, Parker et al, 2017). This point-source character also tends to result in concentrated ownership, since viable deposits may only be accessed by small numbers of firms at sufficient economies of scale (Auty, 2001). This creates the propensity for correspondingly high concentration of resource rents, with consequences for inequality on local and national levels (*Ibid*; Thorp et al, 2012; Le Billon, 2012). Crucially, however, this is mediated by landed property, which, as discussed below, is a key barrier to accumulation in mining (Capps, 2012).

A further, but inter-related, distinctive feature of industrial mining is its capital intensity. Extraction tends to be costly and technologically complex, not least because accompanying infrastructure often has to be built from scratch to make deposits accessible. New projects typically require large up-front fixed costs subject to long pay-back periods, exposed to high commodity price risk (Runge, 1998). This is particularly so for deep-level hard-rock mining

⁴ These generalisations preclude the fact that many forms of artisanal mining more closely resemble diffuse-source activities, while some forms of highly-capital intensive plantation agriculture can more closely resemble ‘point-source’ activities (Auty, 2001: 6)

such as gold and platinum in South Africa. Besides compelling concentration of ownership, this also contributes towards the high levels of price volatility which are inherent to mineral commodity markets. Demand for minerals is highly cyclical, but added to this the capital intensity of production and long lead-times for new capacity means there is, in most mineral-commodity categories, low price elasticity of supply (*Ibid*). This creates the potential for price spikes related to under-supply, and prolonged price slumps when excessively-optimistic capital expenditure creates a glut. This is common to most capital intensive industries, from steel to shipping logistics. However, in mining access to and control of reserves mediates firms' ability to grow and to navigate these fluctuations. Companies must continually seek access to new reserves (Fine, 1994), while ideally consolidate to prevent over-exploitation of existing reserves. This "search for access inevitably puts [extractive] firms into relation with those actors and communities who currently hold rights to lands and resources" (Bridge 2008: 406; Capps, 2012).

Financialisation pressures may exacerbate such tensions. As opposed to lower-risk investments in less volatile industries such as industrials or utilities – the overwhelming focus of studies of financialisation of the firm – investors in the extractives tolerate high levels of risk in the expectation that companies can generate large capital gains and cash distributions during fleeting periods of boom (Rudenno, 2012). During such booms, therefore, "rapid extraction of large volumes of resources becomes a primary driver of firm strategy" (Parker et al, 2017: 18), and correspondingly there is pressure to expand production via new reserves.

There are important corresponding implications for understandings of the financialisation of the firm. Contrary to established literature on financialisation of the firm that sees financialisation diminishing the tendency for long-term investment in capital goods vis-a-vis either financial investment or distributions to shareholders (E.g. Lazonick, 2010; Stockhammer, 2004), in the extractive industries the necessity for firms to generate shareholder value by responding rapidly to upswings in the commodities cycle to increase output creates an inclination towards sudden and euphoric surges of high-risk capital investment. Financialization is, as Lazonick (2010) argues, not simply generative of inequality between shareholders and other non-financial stakeholders, but instability also as managers stretch balance sheets in pursuit of improved shareholder returns on capital (See also Fligstein and Shin, 2007). As discussed in Section 4 below, intensified boom-time shareholder demands on mining companies manifested not simply in increased cash distribution to shareholders and increasing leverage, but on creating a suitably large pipeline of growth projects that would

enable companies to reap the benefits of the anticipated ‘commodities supercycle’. This generates risks both in terms of balance sheet fragility and excess capacity. As will be argued, financialisation of the firm thereby amplifies the inherent volatility of the mining industry.

This in turn, has important consequences for thinking about industrial mining and development. As Parker et al argue, there is “a tension between the de-territorialization tendencies of global financial markets and the localization pressures associated with rapid resource extraction that vary across the boom–bust cycle” (*Ibid*: 18-19). Financialisation is an abstractive force, conceptualising the firm as a bundle of assets which must be continually reshuffled and adjusted to achieve competitive rates of return in response to changes in market prices (Morgan, 2014), while mining as a landed industry is an inherently place specific activity, tied unavoidably by geology to specific extra-firm actors such as the labour force, communities and national governments, in a manner which more geographically mobile industries are not. The amplified volatility which financialisation of the firm creates will have more severe social consequences in a developing-country context with high levels of poverty, inequality and unemployment, where many livelihoods are directly dependent on or affected by mining, and where expectations of the mining industry’s developmental contribution is often very high (Bebbington et al, 2008).

3: Financialisation, internationalisation and corporate restructuring

This section provides context on the rise of shareholder value pressures in the South African mining industry in a context of increased liberalisation and financialisation in the South African economy in the early post-apartheid period stemming from a neoliberal economic reform process. For PGM mining, this entailed mining companies being unbundled from larger diversified conglomerates, integrated within increasingly internationalised capital markets and subject to increasingly speculative, short-termist investor pressures as the minerals commodity boom got underway in the late 1990s. Economic liberalisation in South Africa had been partially initiated in the late-apartheid period, but was fully embraced after 1996 when the ANC shifted from an initially social democratic policy programme to the neoliberal Growth Employment and Redistribution programme. This shift has been extensively analysed elsewhere (e.g. Ashman et al, 2011; Bond, 2000; Marais, 2011). For this article, it is important to note that alongside fiscal austerity and tight monetary policy, the programme involved extensive financial market liberalisation and lowering of capital and exchange controls, the

purpose being integration with the global economy and attraction of foreign investment (Ashman et al, 2011). This began a process of financialisation of the South African economy, which manifested in changes to the strategy and structure of big business.

Diversified conglomerates had been a dominant form of mid-20th capitalism in most major economies, but South Africa represented a particularly extreme variant in levels of consolidation. At the transition to democracy, six conglomerates controlled around 85% of the Johannesburg Stock Exchange's (JSE) value, with Anglo American the largest (Chabane et al, 2006: 553).⁵ This partly reflected economic isolation which compelled domestic investment of surplus, but more so a highly specific system of accumulation that Fine and Rustomjee (1996) call the minerals-energy complex (MEC): with conglomerates centred around mining and with oligopolistic control of finance and heavy industry, supported and enabled by close relationships between government and business (Ibid). Scale also enabled conglomerates to mobilise financial resources sufficient to fund the enormous investments required to access South Africa's deep-lying precious metals (Innes, 1994; Robinson, 2012). However, as mentioned in the preceding section, mainstream financial thinking had turned against conglomerates, with concerns over transparency meaning their shares tended to trade at a discount to asset values. Unlocking this latent shareholder value required restructuring into more coherent, focused entities, which would be simpler to manage, and furthermore could be externally analysed, accurately valued, and benchmarked against comparable peers and ultimately thereby disciplined by investors (Davis, Diekmann & Tinsley, 1994). These market demands partially aligned with the transformation strategy of the ANC government. Early approaches to black economic empowerment (BEE) strategies who sought to reduce white dominance of key sectors and further black ownership through asset divestures from the conglomerates (Chabane et al, 2005; Southall, 2004; Zalk, 2017). The conglomerates rapidly unbundled during the 1990s and early 2000s, producing more sectorally-focused stand-alone businesses, particularly in mining. Accompanying this was a strategic shift from corporate management to internationalisation, with several of the largest South African companies moving their primary listing to the London Stock Exchange.

These broad changes in corporate strategy were reflected in the trajectories of the three largest PGM mining companies which are the focus of this article: Amplats, Implats and Lonmin.

⁵ These were Anglo (38.9%), Sanlam (12.7%), Stanbic/Liberty life (5.8%), Rembrandt/Remgro (13.2%), SA Mutual/Old Mutual (11.2%), Anglovaal (3.1%), these are figures for the 1991-1995 period (Chabane et al, 2005: 553)

PGM production in the late apartheid period was almost entirely accounted for by three companies which formed parts of larger conglomerates, who during apartheid had secured control of key mineral deposits through a combination of large portfolios of privately owned mineral property rights, and deals with Homeland governments, whose land overlay large sections of the Bushveld Complex (Capps, 2012). The largest was Rustenburg Platinum Mines (RPM), controlled by Anglo American via Johannesburg Consolidated Investments (JCI), Implats controlled by Gencor, and Lonplats, controlled by Lonrho. Amplats was created from RPM and JCI and Anglo American's other platinum assets, and listed on the JSE in 1997, with Anglo American retaining a controlling interest. Two years later Anglo American moved its primary listing and headquarters to London, claiming the move would eliminate a 25% discount on its shares and ease access to capital (Cohen, 2016). In the more competitive, shareholder value-orientated culture of the London investment and analyst community, the financial performance of Anglo and its charges became subject to intense scrutiny. In fulfilment of investor demands, management shed industrial assets to focus on mining, and began diversifying its mining assets away from South Africa, competing directly in shareholder value delivery with the other London-listed diversified mining companies such as Rio Tinto and BHP Billiton (Anglo American, 2003, 2004 & 2005).

Implats emerged from the mining conglomerate Gencor. Having divested non-mining assets and its non-precious metals division, Billiton, to list in London in 1997, Gencor's 46.5% stake in JSE-listed Impala became its only significant asset (RBC Dominion Securities, 2001). This was unbundled in 2003, with Implats the same year disposing of its 27% stake in the key subsidiary of fellow PGM miner, Lonmin (Implats, 2003: 8). Lonmin itself was created from the mining assets of London-listed but Africa-focused conglomerate Lonrho. Following the 1993 defeat of Lonrho's infamous chief executive, Tiny Rowland, the company responded to investor pressure by selling off non-core assets (CIBC Wood Gundy, 1999). Mining assets were spun into Lonmin in 1996, which quickly sold its gold and coal operations to focus on PGMs, which it dubbed the "metal of the future" (Lonmin, 2001).

This process of restructuring and embedding in international capital markets took place alongside the onset of a boom in mineral commodity prices, driven by a long period of global growth and the increased demand for industrial metals generated by Chinese urbanisation and industrialisation. This subsequently became popularly referred to as the commodities 'supercycle', with the argument behind the term being that the upturn in mineral prices would last longer than a conventional minerals price cycle. As discussed below, mining company

executives were enthusiastic proponents of this narrative when speaking to the markets. As Humphreys (2015) describes, after decades in which mineral prices had been subdued and mining seen as a generally low-growth and high-risk investment, these events transformed investor perceptions. Major listed mining companies became the object of heightened speculative interest (*Ibid*; Bridge, 2004). This was particularly so for PGM mining. The primary use of platinum and palladium is in catalytic converters, and with new clean air legislation being introduced worldwide, demand for the metal grew substantially. Having been largely flat for the prior decade, from the late 1990s, platinum prices doubled in less than five years (Figure 1).

The three companies described above controlled more than 90% of South African platinum output in the mid-1990s. Though this figure subsequently declined with new entrants to the sector and use of joint-ventures in response to BEE legislation and as a means of alignment with tribal authorities, whose land overlay key deposits and were therefore key mediators of the industry’s expansion (Author, 2018; Mswana & Capps, 2015) (Figure 2), the sector remained consolidated around these three companies, which besides dominating mined output also controlled smelting and refining operations. Combined with the fact that all were producing a generic commodity in refined metals, the booming demand for PGMs meant that product market competition was less significant relative to capital market competition.

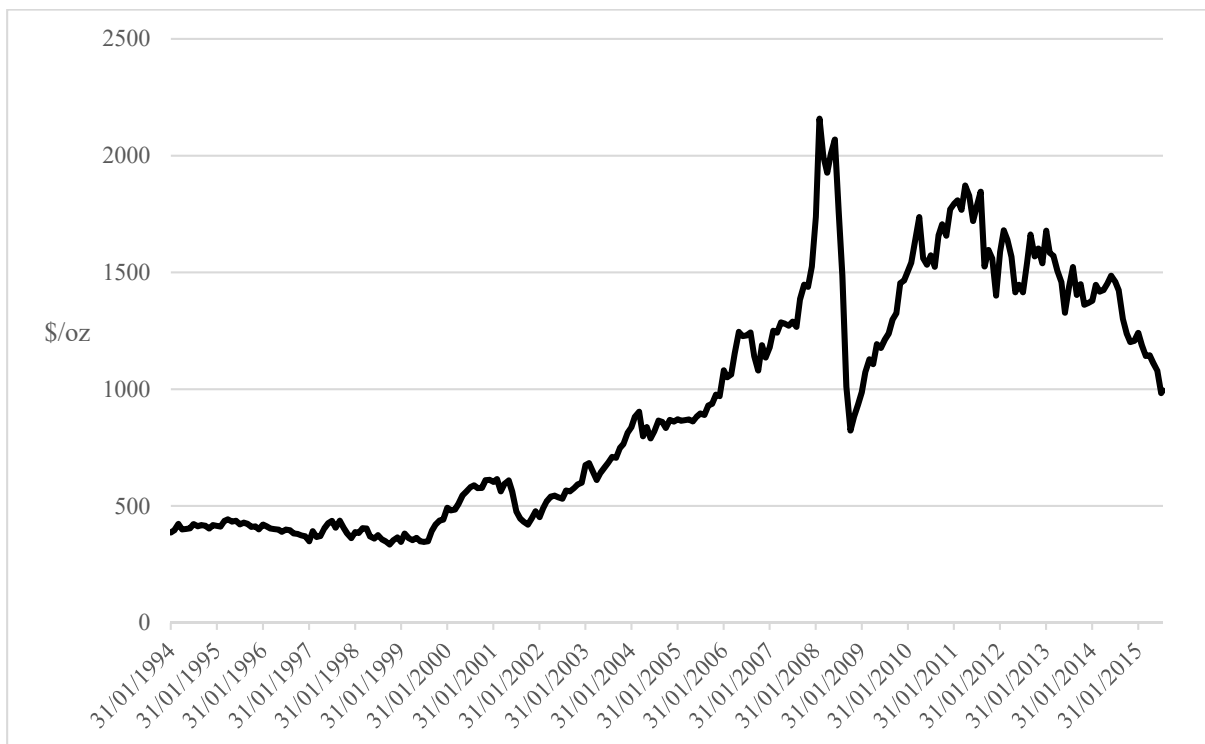
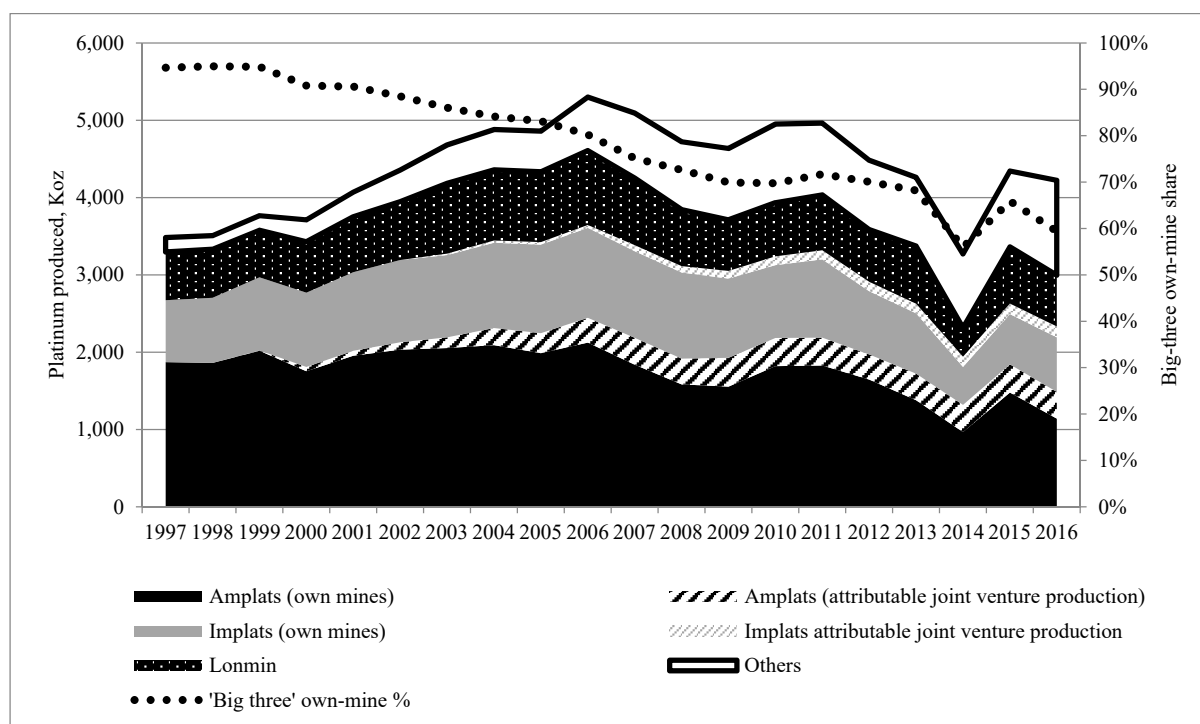


Figure 1: Platinum price 1994-2015 (US\$/ounce)

Source: Bloomberg Data.



6

Figure 2: Structure of South African platinum production, 1997-2016

Source: Company reports.

As witnessed elsewhere as a feature of financialisation, investment strategies toward the sector became increasingly short-termist, manifesting in shorter durations of asset holding and pressure on management to deliver shareholder value over a shorter time horizon (Haldane, 2010; Orhangazi, 2010). This change was observed by analysts. As one in 2002 stated, “the majority of PGM investors are far more geared to a three-month view” of the sector, with only a minority being “fundamental long-term participants” of three to five years (ING Financial Markets, 2002: 30). Average stock holding periods on the JSE declined from 15 years in the 1980s to one year in the late 1990s following the introduction of electronic trading (Lamprecht, 2013). This is reflected in the JSE listed Amplats and Implats. In terms of the former, its predecessor RPM had a free-float average share holding period of four years in the early 1990s, but by the mid-2000s this had fallen to below one year.⁷ For Implats, a more liquid stock given its larger free-float, the change was more dramatic, with average holding periods falling to a

⁶ ‘Own-mine’ refers to production from mines which are wholly-owned and controlled by the company in question (notwithstanding minority BEE share ownership) rather than operated as joint-ventures.

⁷ Author’s calculations from Bloomberg Data and Company Accounts.

few months through the 2000s.⁸ Alongside the speed of turnover was a shift in the geographical composition of the shareholder base. Besides Lonmin and Implats (through its majority shareholder, Anglo American) ties to the London Stock Exchange, there were large increases in foreign institutional investors in the JSE. This meant, for example, that at the height of the boom in 2007, South African-domiciled investors made up only half of the Implats shareholder base (Implats, 2006: 23).⁹ This embedding within increasingly mobile and interconnected international capital markets entailed, firstly, that shareholder expectations of the sector's financial performance would be assessed with regard to opportunity costs of other potential investments worldwide, a process of abstraction which added to the demands placed on management to deliver short-term returns. Additionally, as Morgan (2014) has argued, the pre-eminence of the key financial centres in the US and Europe as nodes in the global financial system for the major capital market intermediaries and institutional investors, has served to diffuse Anglo-Saxon norms for corporate governance and strategy, in a manner which undermines some historical institutionalist understandings of multinational firms as being shaped primarily by their immediate domestic context (See also Morgan & Hull Kristensen, 2006). These factors combined to exert a mimetic pressure to adopt generic strategies for the delivery of shareholder value. Reinforcing this, the PGM companies began adopting increasingly complex executive remuneration schemes tied to relative performance in shareholder value metrics.

The following section examines how these pressures manifested in company strategy, and the consequences thereof. It is important to first provide some context. As Froud et al (2006) note, financialisation does not produce predictable, homogenous outcomes and shareholder value often proves a "rhetoric which disappoints" because companies' financial performance is always partly determined by external variables beyond management's control. This is particularly so for PGM mining companies, which are ultimately price-takers on international markets for a generic and easily substitutable commodity. Recalling the price trends in Figure 1 above, the financial performance of the three major PGM mining companies over the two decades studied here can be split into two periods of extreme contrast. First, a long growth period from 1998-2008 driven by rising metal prices and demand, punctuated by a minor downturn caused by adverse exchange rate movements, and culminating in a dramatic price

⁸ Author's calculations from Bloomberg Data and Company Accounts.

⁹ Bloomberg data

spike (Figure 1). Second, a period of prolonged downturn from 2008 – punctuated by a brief rally in 2010-2011 – as metal prices fell.

PGM mining had developed around a highly labour intensive business model, using hazardous drilling and blasting techniques similar to those in gold. This was partly a response to challenging geology, in that deposits were predominantly deep underground and in narrow, inconsistent reefs which made mechanisation difficult (Stewart, 2015). However, it was facilitated by the apartheid migrant labour system, which provided cheap labour and harsh disciplinary controls (Bezuidenhout & Buhlungu, 2011). Labour typically accounts for 50%-60% of operating costs in a conventional labour-intensive PGM mine, and so control of this variable is a key determinant of profitability. As a result of new legislation from government and trade union pressure, labour costs have increased throughout the post-apartheid period (Author, 2018). However, during the first period this was not a significant issue: increases were from a low base and metal prices were high enough to make PGM mining a high profit margin activity. Shares substantially outperformed the JSE40 index and JSE Mining index, peaking at around 10% of total market capitalisation in 2008 (Figure 3). Levels of economic value added – returns on capital above the weighted-average cost of capital – were positive throughout this first period (Figure 4), and well in excess of the 3% - 4% which mining companies reportedly target for new projects (ThomsonReuters, 2014: 15).

From 2008 onwards, however, lower metal prices have met escalating labour costs, alongside increases in other key inputs, notably electricity, and more challenging geological conditions as richer, shallower deposits have been extracted. Since then, shares have underperformed benchmark indices (Figure 3), with the companies now accounting for less than 1% of market value, and unable to achieve returns which meet their cost of capital (Figure 4).

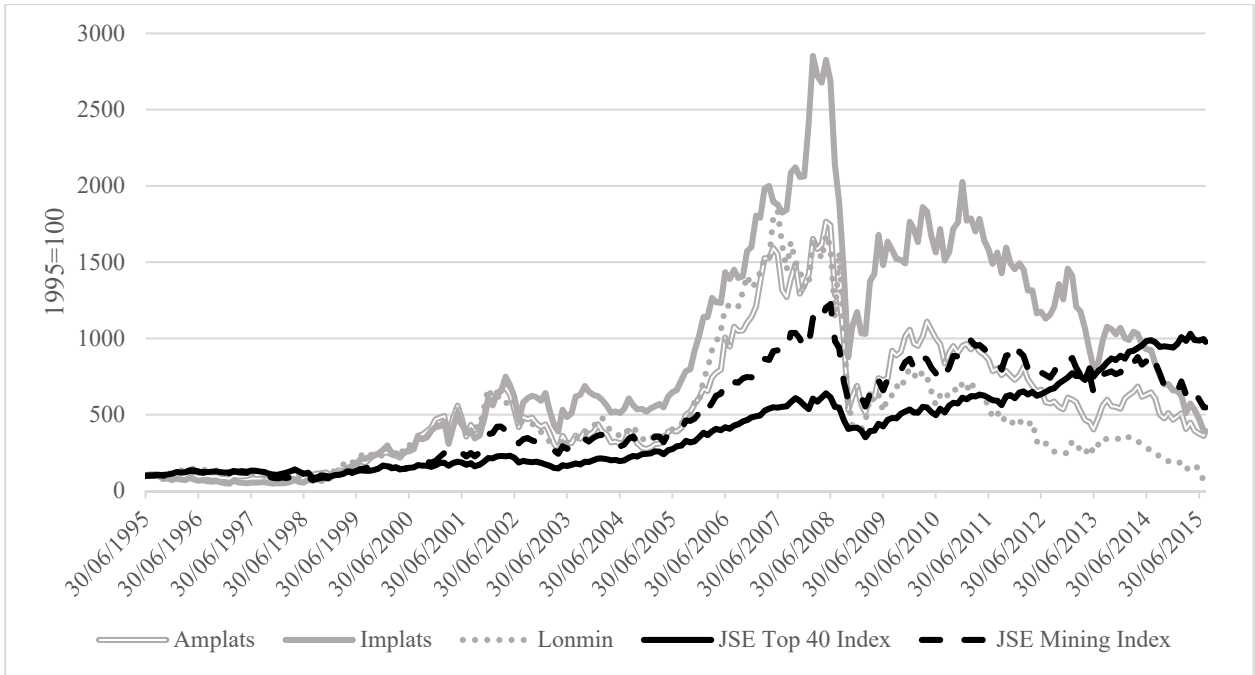


Figure 3: Index of platinum stock prices in comparison to the JSE40 and JSE Mining Index

Source: Bloomberg data.

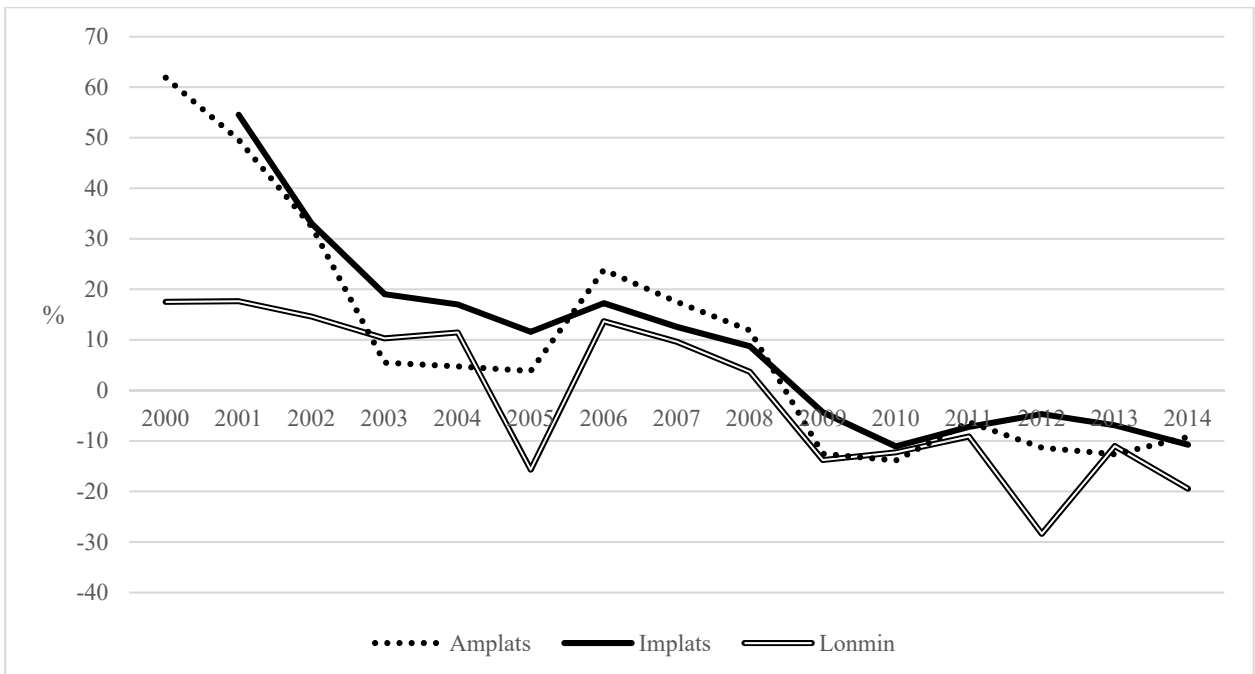


Figure 4: Economic value-added spread, 2000-2014.

Source: Bloomberg.

As discussed in the preceding section, such periods of boom and bust have historically been recognised as intrinsic to the nature of extractive industry investment due to the highly cyclical nature of demand, and the likelihood of unanticipated gluts or shortfalls in supply given the time taken to commission new production capacity. This is more so for platinum given its high substitutability and price elasticity of demand. In this case, however, the pressures derived from financialisation of the sector and management efforts to satisfy shareholder value demands, led to the adoption of strategies which ultimately exacerbated this volatility.

4: Strategic responses to financialisation: setting the bar higher

Following unbundling, PGM mining company management adopted aggressive shareholder value delivery strategies. This manifested in, firstly, large cash distributions to shareholders. Secondly, aggressive expansion programmes to access new reserves and demonstrate future growth prospects. And thirdly, related to this, forms of balance sheet engineering to increase leverage and minimise cash reserves as a way of improving key shareholder value metrics and reducing the cost of capital. This represented a high-risk strategy for an industry as historically volatile as PGM mining. However, it was compelled by capital market competition and legitimated by a narrative, adopted by company management, that the ‘commodities super-cycle’ made conventional precautions unwarranted. Reviewing previous annual reports, previous boom phases were viewed with caution as fleeting, and not periods in which to increase leverage. For example, in 1987, after two years of record profitability, RPM (the predecessor to Amplats) management stated a priority of “continued strengthening of the Group’s financial position in order to be better able to withstand a deterioration in market conditions” (RMP, 1987: 4; RPM, 1988: 12), and in 1994 on “building cash reserves during the good times” (RPM, 1994: 5). This conservatism did not align with the heightened investor expectations of the 2000s, in particular for Amplats’ parent company, Anglo American (henceforth, Anglo). This was in part a reflection of the political risks accompanying this turbulent period of South African history, but also reflected a qualitatively different approach to corporate strategy which saw aggressive leveraging during a boom period as excessively risky.¹⁰

¹⁰ Interviews with former mining executives, July-August 2016.

Having listed in London, however, Anglo American found itself subject to intensified market scrutiny relative to its more cosmopolitan peers. It was derided, from an investment analyst perspective, for underperforming its major rivals, Rio Tinto and BHP Billiton and being too financially conservative (Credit Suisse, 2006; JPMorgan, 2007). Its responsive attempts to create “a focused business to deliver improved returns to our shareholders” involved, firstly, shedding assets that lowered group-level returns and removing non-core subsidiaries that were not geared to the commodities supercycle (Anglo, 2003: 3; Anglo, 2004-2005). Notably, paper manufacturer, Mondi, offered a counter-cyclical hedge but during a commodities boom dragged down group-level returns, and so was sold (Investec, 2006). Management simultaneously focused on increasing exposure to industrial minerals in demand by China – particularly copper and iron ore – through a spree of debt-financed acquisitions of mining assets (Anglo, 2004-2007). Finally, to win market approval, in the mid-2000s the company committed to an aggressive dividend and share buy-back strategy. This was lauded by Deutsche Bank (2006) analysts as “setting the bar higher for industry as a whole”, “leading the way on shareholder returns” by Credit Suisse (2006), and “astonishing” by Morgan Stanley in its praise of the “new Anglo” (2006). This resulted in \$10bn of share buybacks in 2006-2007, with dividends per-share increased nearly 250% between 2002-2006.¹¹ Briefly during 2006-07, Anglo shares outperformed Rio and BHP.

Amplats’ own strategy was shaped by this competitive struggle on the London Stock Exchange. Recognising its cash generating potential, Anglo had progressively increased its stake in Amplats from 50% in 2000 to 80% by 2008. Amplats’ correspondingly adopted an aggressive dividend policy to distribute cash upwards to Anglo.¹² This was at the expense of the company’s balance sheet strength. A 350% increase in dividends per share in 2006 was interpreted by UBS as “an attempt to get balance sheet gearing as they [management] indicated they are more confident in the duration of this cycle and are happy to have debt” (UBS, 2007: 5). The dividend cover ratio was lowered to 1, a ‘full distribution’ policy to pay out all net profits.¹³ Subsequent dividend payments of R13.8bn in 2006/07 and R12.3bn in 2007/08 were more than was spent on employee costs in those years, despite the company’s high labour intensity and full-time workforce of over 50,000. This corresponded with a shift in financial position from net cash of R4.9bn at the end of 2006, to net debt of R19bn at the end of 2009.¹⁴

¹¹ Company annual reports, various years.

¹² Appendix 1.

¹³ Appendix 1.

¹⁴ Appendix 1.

Following a subsequent R12.5bn equity raising in 2010, JPMorgan (2010: 8) analysts noted, “[b]orrowing to pay dividends in a cyclical single commodity miner has never been the smart thing to do.”

Implats and Lonmin followed similar paths. Pressured by analysts viewing cash buffers as representing a “lazy” balance sheet, Implats management pledged to higher gearing and “retuning the benefits of any excess cash to shareholders” (Implats, 2004: 7-14; JPMorgan, 2006; RBC, 2006; JPMorgan, 2008). Pledging to ensure shareholders were “well rewarded”, in 2008, it lowered dividend cover to enable increased payments (Implats, 2008: 16-20).¹⁵ Seen by analysts as “cash flush” (Macquarie, 2010) even following the crash, the company continued paying dividends. With net cash of R8.5bn at the end of its 2007/08 financial year Implats paid out R8.5bn of dividends during 2008/09, eventually shifting into a net debt position of R2.3bn in 2012 while paying a R3.3bn dividend.¹⁶ With benefit of hindsight, BNP Paribas analysts (2013) noted this was “an ominous first for a company that has prided itself on balance sheet robustness and has in the past issued what now appear to be overly generous dividends”. It was forced into a R4bn rights offer in 2015. Lonmin entered financial difficulties earlier and with greater severity. The company’s aforementioned restructuring in the early 2000s had generated large cash reserves from asset sales, which management worried would create a “less than efficient balance sheet” (Lonmin, 2001: 4). This was distributed to shareholders through share buybacks and a capital return (HSBC, 2001; Lonmin, 2002).¹⁷ As one analyst put it, the company had “far exceeded market hopes” in its efforts to deliver shareholder value:

For those seeking signs of a changed mindset in the management of the so-called ‘heavy industries’ after years of boom and bust, and value destruction through over-investment in new capacity, the move by Lonmin to return capital to shareholders and gear up to 20% to improve returns on capital is a very encouraging development indeed (Schroder-Salomon-Smith-Barney, 2001: 2).

The company was also highly profitable, described by one as a “cash machine” (JPMorgan, 2004), but sought to fund its capital expenditure through debt to increase gearing and lower the cost of capital (Lonmin, 2002: 3).¹⁸

¹⁵ Appendix 2

¹⁶ Appendix 2

¹⁷ Appendix 3

¹⁸ Appendix 3

Alongside the other two large PGM miners, Lonmin pursued an aggressive expansion strategy which increased indebtedness, and ultimately created financial fragility and over-capacity which intensified and prolonged the slump.¹⁹ As with the increased predilection to distribute cash to shareholders at the expense of balance sheet resilience, this increased risk appetite was underpinned by narrative. Similar to banks' pre-2008 crash arguments that securitisation had finally eliminated credit risk (Engelen et al, 2011), mining companies justified rapid expansion, increased leverage and dividend policies with a 'this time it's different' story: rather than a fleeting boom, prices would stay 'stronger for longer' in a commodities 'supercycle'. The term was coined by an investment analyst, but adopted widely by mining executives for whom the term alleviated doubt and legitimated the sectoral growth narrative used in talking to the markets (Humphreys, 2015). As this became a form of prevailing wisdom, failure to demonstrate commitment to growth with a suitable pipeline of projects was interpreted negatively by the markets as conservatism.

To this end, Implats' management in the early 2000s promised investors a near doubling of platinum production by 2006 to 3.5moz/pta (Credit Suisse, 2001), raised to 4.3moz by 2015 in 2007 (Credit Suisse, 2007). Lonmin progressively raised output targets through the boom, and in 2006 pledged to more than double platinum production to over 2moz (Lonmin, 2006: 6). These targets were never hit, with companies over-promising and under-delivering. Nonetheless, the process was costly. Factors including greater mine depth, unanticipated geological and technological challenges and rising input costs led to an increasing disconnect between investment and output growth. Implats' average annual capital expenditure of R2bn in the 1990s rose to an R11bn average in the 2000s in real terms, Impala's from R1bn to R4.5, but without commensurate increases in volume.²⁰ Industry-aggregate capital expenditure per ounce rose in real terms from R1,000 in the 1990s to over R4,000 (Venmyn-Deloitte, 2015).

In addition to large capex increases, Lonmin and Implats also attempted to buy in growth with a series of costly and unsuccessful acquisitions near the peak of the boom. Lonmin paid \$192m in 2009 for Southern Era Platinum, a mine mothballed by Implats in the 1990s and sold to Southern for \$10m in 1999 (JPMorgan, 2005). This was followed by the \$413m acquisition in 2007 of Afriore's undeveloped Akanani exploration project, which required an estimated additional \$700m to bring into production. This was large relative to capital expenditure, which was \$276m that year (Lonmin, 2007), but justified by the assertion that "[p]latinum has some

¹⁹ Appendix 3

²⁰ Author's calculations from company accounts. Appendices 1-3.

of the best economic fundamentals in the natural resource universe” and that the company was determined to position itself to capture growth (Thomson, 2006). The former mine was mothballed in 2009, and the latter remains undeveloped and heavily written down (Lonmin, 2012: 128). Implats, meanwhile, invested heavily in a high-risk acquisition of Zimbabwean PGM assets in the early 2000s, and in 2007 acquired the undeveloped Leeuwop project for R4.2bn (~\$590m) as part of its stated commitment to “deliver superior returns to shareholders by focusing on growth” (Implats, 2007: 12 & 25; Implats, 2008: 14). The former was successful operationally but investment has been hampered by conflict with the Zimbabwean government over indigenisation legislation and control of land, while the latter has still not reached production and has been heavily impaired (Implats, 2014: 50). To the edge of the global financial crisis in mid-2008, amid signs of a slowdown, the companies maintained that growth would continue unabated (Amplats, 2008: 6; Thomson, 2008).

The excesses derived from efforts to please the markets during the boom exacerbated the impacts of the slump. Companies went from enjoying strong, often spectacular, free cash flow pre-2008, to mostly negative cash flow after capital expenditure from 2009. This necessitated shareholder bailouts in the following years, four times since 2009 in Lonmin’s case. Sums raised were comparable to amounts paid out in the euphoric final years of the boom in dividends or on ill-fated growth projects. Indeed, for Implats and Amplats, the real-terms proceeds from issuance of share capital amounts to just over 10% of dividends and share buybacks over the two-decade period.

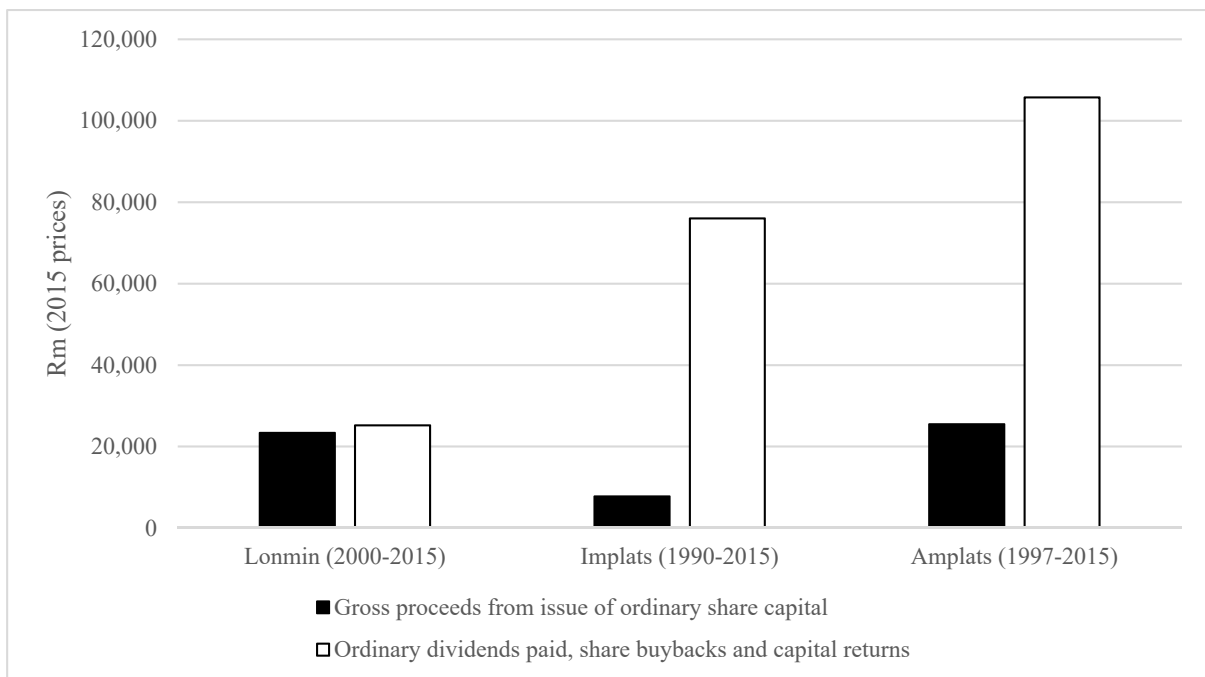


Figure 5: Proceeds from share issuance against dividends and share buybacks (2015 prices)

Source: Company annual reports and accounts

In these changed circumstances, international institutional investors which had piled into South African mining during the boom withdrew. Between 2007-2016, 40% of the 50 largest shareholders in 2007 – those seeing the largest rewards from the boom – exited their investments in the companies.²¹ South African investors comprised half of Implats shareholder base in 2007, but this increased to two thirds by 2016, while for Lonmin, South African shareholding rose from just 6% in 2010, to just under 40% in 2016.²² Notably, in both cases the Public Investment Corporation (PIC), which manages the Government Employees Pension Fund, has become the single largest investor, in Lonmin's case supporting the heavily-discounted \$400m 2015 rights issue which prevented bankruptcy as a means of safeguarding employment.

To maintain access to capital markets the imperative for the companies was restoring an internationally competitive rate of return. Anglo, for example, committed to a group-level return on capital employed (ROCE) target of 15%, with capital to be directed to assets with the highest potential for returns (Anglo, 2014: 9). Lonmin similarly pledged that capital would be allocated to projects offering “no less” than 15% internal rate of return, saying they “acknowledged our assets compete for the limited amount of available capital” (Lonmin, 2014: 18-19). These aspirations proved unrealisable, but they did contribute to the intense labour conflict which engulfed the sector in the period 2011-2014. As mentioned above, PGM mining had developed around a highly labour-intensive business model, and therefore a key means to cut costs was through the workforce. During the slump, it is generally only the more modern and mechanised mines which have remained profitable (Author, 2018). In addition, with large above ground stocks of platinum developed during the boom, the industry suffered from severe over-capacity that was recognised as depressing prices. This combined to create pressures for wage moderation, workforce reduction, and the closure or divestment of the most labour-intensive shafts.

Simultaneously, however, workers were intensifying campaigns for wage increases, propelled by emerging forms of insurgent unionism and inter-union competition (Sinwell, 2016).

²¹ 44% for Amplats, 38% for Implats and 40% for Lonmin. Author's calculations from Bloomberg data.

²² Bloomberg data

Enduring a harsh and dangerous working environment and abysmal living conditions in the large informal settlements in the major mining areas (Makgetla & Levin, 2016), workers began demanding a ‘living wage’ of R12,5000. Compelled by the aforementioned financial considerations, management attempted to resist these demands, resulting in a wave of lengthy and violent strikes in 2011/12 and again in 2014, which stand out as among the most severe instances of social conflict in post-apartheid South Africa (Chinguno, 2015; Capps, 2015).

The workforce for the sector has fallen significantly as part of the adjustment, from a pre-crisis peak of 200,000 to 172,000 in 2016. This inevitably entails major social costs in the South African context of high poverty and unemployment, where low-wage PGM sector workers on average support around 10 dependents (Makgetla & Nevin, 2016). This may have been more but for state intervention. Possessing the largest number of mining assets, Amplats in 2012 announced a strategy to restructure out of older, labour intensive mines representing 50% of the workforce, and “transition to a lower-cost, more focused quality portfolio” in its more mechanised operations (Amplats, 2014: 37). This was not because the shafts identified for closure in the restructuring were irredeemably unprofitable, rather they acted as a drag on aggregated group returns (Credit Suisse, 2015; UBS, 2012; Deutsche Bank, 2012; RBC, 2015). In its initial proposals, it sought to mothball four shafts, thereby “retaining flexibility for long term growth options”, while laying off 14,000 workers – albeit with proposals for re-skilling and redeployment of 30% of these (Amplats, 2013; Amplats, 2012: 2-3; ThomsonReuters, 2013). Government then intervened to attempt to halt the redundancies, reportedly threatening to revoke mining licenses (JPMorgan, 2013). Amplats relented, reducing redundancies to 6,000, and committing to sell rather than mothball the operations (Absa, 2013). In Lonmin’s case, state intervention to preserve jobs came in the form of the PIC underwriting the aforementioned 2015 rights issue, without which the company faced potential bankruptcy with 35,000 jobs at risk. With private shareholders shunning the offer, the PIC increased its stake from 7% to just over 30%, with the PIC CEO commenting that “[n]ot supporting Lonmin would put the company at risk and it could potentially be harmful to the industry and the communities where Lonmin operates as well as the economy at large” (McKay, 2015).

As of the time of writing in 2018, the sector remains in crisis. The most recent manifestation has been multiple sales of mining assets, notably to Sibanye-Stillwater, the former gold mining company which has purchased mines from Amplats, Aquarius platinum and, most recently, Lonmin, to establish itself as the world’s second largest platinum miner. Further redundancies are expected (JPMorgan, 2018). While the duration of the slump relates to global platinum

market dynamics which have depressed prices, as this section has shown, its severity in terms of both financial and social impacts relates in large part to shifts in management strategy in response to financialisation. Efforts to generate short term shareholder value in the boom phase resulted in high levels of risk taking – in both expansion plans, financial engineering, and dividend policies – which placed the companies in a precarious and vulnerable position when the crash arrived, and in addition created a large overhang of excess capacity. This had distributional consequences, with international investors enjoying the gains from this period exiting during the slump, and much of the burden of adjustment in the form of redundancies and social unrest falling on workers, communities and the South African state.

6: Conclusion

As this paper has shown, capital market competition and management efforts to fulfil narratives of shareholder value delivery during the boom manifested in aggressive dividend policies, high-risk balance sheet engineering, and excessive capital outlays on capacity expansion and M&A activity. The result was financial fragility and excess capacity which has exacerbated the impact of the slump in subsequent years with severe social consequences. In effect, the financialisation of firm strategy served to intensify and amplify the inherent volatility of the mining industry. Conventional arguments that such payments to shareholders represent necessary reward to shareholders for services rendered in the form of investment and long-term stewardship and monitoring of management, are difficult to maintain in this case. With the rapid exit of international investors when the boom ended, equity markets functioned more as a means of extraction than investment.

This, and the strategies adopted by the PGM mining companies discussed in this article are in some respects similar to those which would be anticipated from other studies of financialisation of the firm (e.g. Fligstein & Shin, 2007; Lazonick, 2010; Froud et al, 2006). As argued in Section 3, the integration of the companies into global capital markets increased competitive pressure to generate higher shareholder returns for internationally mobile institutional investors, and compelled the mimetic adoption of strategies of shareholder value delivery through balance sheet engineering and large dividend payouts. However, this abstractive tendency contradicts the social and materially embedded nature of mining as a land-based industry with large up-front capital requirements and long production lead times, that is inherently cyclical and volatile (Bridge, 2008; Parker et al, 2017). As the paper argues, these

characteristics mean that financialisation compels behaviors in mining firms which run somewhat contrary to established understandings of financialisation of the firm, which see financialisation as diminishing the inclination toward long-term capital investment. Instead, mining firms are compelled to respond rapidly to upswings in the commodities cycle with surges of capital investment to create new reserves. In a fashion which resonates with cultural-political economy approaches to financialisation, this was underpinned by narratives on the commodities supercycle which legitimised such risk taking. This, in turn, exacerbated balance sheet fragility and excess capacity. The consequences of this heightened instability are likely to be particularly severe in a developing country context. This was all the more so in South Africa due to the historical circumstances, in which labour-intensive PGM mining is an extreme manifestation of the continuing legacies of the apartheid economic model and the path dependencies developed around it. Finally, the study exemplifies the manner in which financialisation “accentuates the inherent competitiveness of capital valuation” (Bryan, Martin & Rafferty, 2008: 467) and intensifies the tensions between the abstractive nature of financial valuation and the contextual, material particularities of economic activity (Sullivan, 2013; Wigan, 2009; Fields, 2017; Clapp, 2014). While such pressures are replicated across many industries and contexts, they are particularly acute in mining by virtue of it being a landed industry. Contrary to other forms of industrial activity, it cannot easily respond to these pressures, crises of profitability, or instances of social conflict through spatial reconfiguration. This is even more so for PGMs compared to other mineral commodity categories given the unusual spatial concentration of reserves within South Africa’s Bushveld Complex.

Appendices

Appendix 1: Anglo American Platinum 1997-2014 (Rm, nominal)					
(Source: company annual reports and accounts, author's calculations)					
	Dividends and share buybacks	Dividend pay-out ratio	Capital expenditure	Capital expenditure/ Net operating cash flow	Net cash/(debt)
	Rm	%	Rm	%	Rm
1997	53	55	641	76	1356
1998	495	40	1460	101	2111
1999	1013	58	1473	50	2215
2000	2457	75	1920	24	6123
2001	7283	73	3586	36	5786
2002	5887	67	5994	95	1444
2003	2732	66	7402	454	-6599
2004	1580	67	4408	92	-2900
2005	2029	61	4362	64	-1830
2006	4851	99	6525	38	4888
2007	12276	99	10653	77	-3596
2008	13816	58	14388	83	-12950
2009	6	0	11301	241	-19259
2010	0	17	7989	71	-4110
2011	3116	51	7504	61	-3662
2012	532	0	7201	381	-10491
2013	0	0	6346	104	-11456
2014	0	0	6863	148	-14618

Appendix 2: Impala Platinum Holdings, 1993-2014 (Rm, nominal)
(Source: company annual reports and accounts)

	Dividends and share buybacks	Dividend pay-out ratio	Capital expenditure	Capital expenditure/ Net operating cash flow	Net cash/(debt)
	Rm	%	Rm	%	Rm
1993	87	43	146	81	-
1994	87	55	200	63	-
1995	109	40	264	73	-
1996	62	43	311	124	-
1997	69	38	275	105	-16
1998	223	44	248	29	623
1999	578	46	431	25	1703
2000	1163	51	783	30	2944
2001	3868	97	2090	37	2812
2002	2309	54	1250	30	2978
2003	2330	52	1787	72	2057
2004	1498	48	1852	102	451
2005	2008	29	2009	72	3786
2006	5468	132	2248	46	1679
2007	3112	74	2887	29	2500
2008	6309	51	5463	48	8883
2009	8546	32	7007	106	1363
2010	1920	50	4632	77	1730
2011	2519	52	5541	67	2117
2012	3364	28	8180	164	-2353
2013	580	57	6455	108	-3366
2014	371	0	4539	107	-3482

Appendix 3: Lonmin PLC 2000-2014 (Rm, nominal)					
(Source: company annual reports and accounts, author's calculations)					
	Dividends and share buybacks	Dividend pay-out ratio	Capital expenditure	Capital expenditure/ Net operating cash flow	Net cash/(debt)
	Rm	%	Rm	%	Rm
2000	719	35	726	41	2765
2001	1032	42	920	33	4160
2002	6302	59	1626	105	-1691
2003	798	137	1280	79	-2283
2004	673	55	1234	76	-1927
2005	641	90	1319	75	-3655
2006	822	38	1207	36	-3023
2007	1221	54	1971	40	-2678
2008	1386	41	2816	54	-2257
2009	0	0	2106	-1463	-1125
2010	0	0	1989	334	-2794
2011	209	21	2850	65	-1633
2012	250	-14	3284	155	-3389
2013	0	0	1469	994	1857
2014	0	0	981	-80	-306

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